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Industrial Camouflage

By NORMAN BEL GEDDES
Norman Bel Geddes & Co., Inc.

AT A RECENT White House press conference President Roosevelt gravely admitted the increasing possibility of enemy attacks on the nation's seaboard areas. It might not be limited to coastal regions, he said, but could well include regions as far inland as Detroit. High-ranking officials of the Army and Navy have long been of this opinion, while the Axis powers have openly boasted of the havoc and destruction they would create when "the day" came.

In the light of such statements, what is industry's responsibility in the broad plan of the nation's defense? That responsibility, it seems to me, is crystal clear—the scientific camouflaging of plants and factories which are manufacturing materials of whatever kind which are essential to our national war effort, wherever such protective concealment is possible.

CAMOUFLAGE DEFINED

Camouflage may be defined as the intentional disguising of a given area or objective by means of deceptive concealment. In warfare, it serves to confound the bombardier by so changing the appearance of his target that he will either miss his objective or score only on a decoy made to resemble the original. It has been said that "the objective of camouflage is to present the raider with a landscape devoid of arresting features." Obviously, then, camouflage must be considered in terms of aerial observation and conditions affecting it.

It is well known that both the Germans and the Russians have not only successfully bombed key targets in closely populated areas but have made mass aerial attacks on whole districts as well. The former is generally called "precision" bombing, or direct bombing on a specified target; the latter is "area" bombing, or the bombing of cities and concentrated industrial areas. It is quite difficult to confuse sections of a city or of a large industrial area so that it escapes detection, not only because of the size, but because of the quantity and proximity of identifiable landmarks to be concealed. But camouflage is essential, and urgently so, for those factories which are not located within the confines of a large city. Their relative isolation is an invitation to attack, and a most helpful landmark for enemy mapmaking. Here camouflage can be highly successful.

This direct bombing of a specified target, or "precision" bombing, is accomplished by one of two methods—by high-level bombing at altitudes of 10,000 feet or more, or by level-flight bombing at altitudes established by local weather conditions and anti-aircraft fire. The bombardier is, of course, greatly assisted by the modern bomb-sight, but he is also greatly handicapped by his excessive rate of speed and approach to the target, his angular view of the target, and the fact that the target must have a diameter of at least six feet to be even a pinpoint on the landscape when viewed from a height of four or five miles. Furthermore, the bombardier, if flying at 200 miles an hour at an altitude of approximately 20,000 feet, must sight his target when he is no closer than five miles of it, and even then, has only fifty seconds to adjust his sight and let loose his bombs. Obviously, confusion of the landscape would seriously hamper his required rapid decision.

We must also take into consideration that aerial navigation is based on mathematical calculation of celestial observations. This does not, however, necessarily enable the bombardier to accurately judge his "ground position." Therefore, a bombardier must make his "fixes" or check his line of flight by continually observing known landmarks. Hence, the problem of camouflage encompasses not only concealing a specific target, but also that of changing the apparent pattern of the surrounding area so as to confuse and mislead the bombardier as much as possible.

PROBLEMS OF COLOR AND OUTLINE

There are three recognition points of a target from the bomber's-eye view: its general outline, its location in relation to other known objects, and the individual color of its reflecting surfaces. Therefore, for purposes of analysis, camouflage may be divided into three phases: 1) The basic necessity of "toning down," or the neutralizing all exterior colored surfaces; 2) blending the other known objects with the visual character of the surrounding area; 3) the disruption or distortion of the outline of the building so as to conceal its basic shape.

The aerial camera is a potent enemy of the camoufleur. By means of infra-red film and various types of filters the camera can reveal the illusion created by a painted surface, because paint lacks chlorophyll, which is an element found in all manner of natural growth. Chlorophyll reflects the light in the infra-red region of the spectrum so that the subject appears white in the infra-red photograph, and, as a result, the white surface of natural growth contrasts sharply with the darker surface of painted substances.

Exhaustive tests and research, however, have enabled the camoufleur to meet this problem by charts giving the *tonal* or photographic qualities of the paint as well as their various color values. He is now able to approximate natural color visually, as well as photographically. It is interesting to note here that a color viewed from a short distance is not the same as when viewed from afar. For instance, the earth's surface appears to be brown when one is close to it, but from a height of several thousand feet, it is distinctly black. This is explained when one understands that in reality the color which one sees as brown is only 10% brown and 90% black. At close range, one can see the reflection of light from the brown, but from afar this is not distinguishable.

There are three related characteristics in a painted surface—*value* (or brightness), *color* and *intensity*, and together these make up *tone*. Color must be matched with regard to visual and photographic perception. While the tone of the object must not be such that it attracts attention, it is essential that it blend with the surroundings. In camouflage the texture which is desired is one that does not readily reflect light. Often this can be successfully achieved by adding small particles to various types of dull paint. It is worth noting that certain sections of a structure under treatment are often intentionally painted with a glossy paint, as reflection can aid as well as minimize the effect of camouflage.

In order that the target shall blend with its surroundings, great attention must be paid to the masking of all shapes or outlines which might be revealing. If the building, when camouflaged, is to represent a low hill, it may be screened over with painted netting to which simulated foliage is attached. Railroad tracks, driveways, small buildings, parking lots and any other identifiable objects must also be blotted out by paint treatments and screening. Shadows cast by any high objects should be eliminated insofar as is possible. This is accomplished by what is known as the "truncated pyramid principle." Simply stated, this is the scientifically developed principle of screening or netting those walls, or projections which throw pronounced shadows. Until recently, escaping steam or smoke has been a major problem, but research has now resulted in various systems which permit the dispersal of smoke and steam so that it is almost impossible to detect from an average bombing height.

To obtain the type of information that is essential to the initial study of a camouflage problem the camoufleur must first make a series of carefully executed aerial photographs of the structures and areas in question. The United States Corps of Engineers has recommended the taking of no less than four oblique shots at various altitudes and from a distance of one mile, and two vertical stereoscopic pictures from the same altitude. It would be helpful if these photographs could be compared with others taken at various seasons of the year, so as to anticipate the visual effects of varying types of weather conditions. Camouflage paint may be considered to be effective at altitudes ranging from 10,000 feet up, and since this is a bombing altitude, a painted object should preferably be studied from varying heights.

A scale model of the structure to be treated is then constructed in so exact a manner that the proposed camouflage installation can be applied to it in realistic detail. The value of this model study is self-evident if one realizes that there is no single or general formula which will result in a successful camouflage installation. Each project presents new problems, and each study provides new solutions.

It is utterly false to assume that the cost of a camouflage installation is exorbitant. The amount expended is predicated on the scope of the installation, and it is well known that successful camouflage treatments may be executed at a moderate cost.

Blackout, though a form of protective concealment which is separate and distinct from camouflage, must be effected at night by any industrial plant desiring maximum protection. Like camouflage, it necessitates a careful study of the problems involved.

OFFICIAL CONCERN WITH INDUSTRIAL CAMOUFLAGE

Modern camouflage technique has been a subject of intensive study by both the Army and the Navy during the past three or four years, but of necessity they have been primarily concerned with installations at military and naval establishments or objectives. In recent months Colonel Homer St. Gaudens, technical adviser on camouflage to the War Department, together with officials of the OCD, various local and state defense committees and other interested persons, have given special attention to the many problems of industrial camouflage.

Although each state has direct control over the protective concealment measures to be taken for all industrial plants within its limits, those industrial plants which are engaged in defense contracts are subject to the set requirements of the government agency by whom the industrial plant is engaged. It is vital, of course, that production in defense plants should continue, and it may be necessary to require greater protective concealment for such plants than for other industrial plants that are not so essential to defense.

I believe the responsibility of plant protection, by means of camouflage, rests squarely on the property owner. For industry to dodge this responsibility by reason of a "let's wait and see what happens" policy is to court disaster, as the lessons learned in England and in France have clearly proved. On the other hand, I am reassured by the knowledge that American industry has always been quick to assume its burden of responsibility at every period of national emergency.

A Stimulus to Productive War Effort[1]

By Frank E. Manchester
Brown and Sharpe Manufacturing Company

THE STEP-UP in production, due to defense measures, has made it necessary, more than ever, to make deliveries of machine tools on date as promised. To facilitate the checking of these deliveries, a control board has been set up in the office of my department where it is accessible to all who have to do with the manufacture of the machines.

Before the use of this control board it was necessary to write out delivery dates, quantities and allotments of the various types of machines, and whenever changes of quantities or dates were made it was necessary to do the job over again. Using this procedure the chances for errors were great, as papers got misplaced or were not read or properly attended to.

The use of the control board has eliminated the possibility of these errors, as all writing has been eliminated and everyone interested checks from the same place.

The board itself was made from a piece of fiber board, with a frame for finish. The front is covered with a sheet of graph paper with one-eighth squares and with the lines at every inch being heavier.

How Control Board Is Used

At the top from left to right over the heavier inch lines are printed the week-end dates for a year in advance. At the left in a vertical column are the symbols of the different types of machines. These too, are printed on the heavier inch lines.

To designate the quantity of a certain kind of machine scheduled each week, a blue pin is used with the figures on the top. These pins are placed in the lower right corner of the one-inch-square space opposite the machine symbol and under the week-end date.

Thus it is possible to show a year's scheduled production ahead, with room in the squares for any special notes, such as lot numbers or any other special information desirable.

A vertical string held top and bottom by two thumb tacks is advanced each week, and any pins to the left of the string show the late machines.

Changes in the numbers of the pins or removal of the pins themselves are made daily by checking with the machine tags which are turned in to the office when the machine has been passed by the inspector.

Main Merits of Plan

The advantages of the board are numerous. In the first place, it has promoted a friendly rivalry amongst the supervisors on the different jobs by their not wanting to be the last one during the week to have his schedule removed from the board.

Secondly, it gives a real picture of your production schedule. From this picture the foremen of the assembly jobs can see when the units they build will be required. The foremen of the erecting floors can see in advance the requirements of man power to complete their schedules.

Thirdly, a late machine is forcibly brought to the attention of the department foreman and the necessary pressure or assistance can be brought to bear on that machine.

And, as stated at the beginning, it eliminates papers with the numerous chances for errors by lack of proper attention being given to them.

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[1] This statement was contributed by Mr. Manchester, Department foreman, grinding machine manufacturing, Brown and Sharpe Manufacturing Company, Providence, Rhode Island, in connection with The Conference Board's recent foreman essay contest on the subject, "How Can a Foreman Meet the Challenge of All-Out Defense Production?"

Wartime Changes in Earnings and the Cost of Living

AVERAGE EARNINGS in manufacturing have increased more rapidly in this war than in World War I. But living costs did not advance so much between wars as did earnings, and have increased more slowly in this war than in the last. The work week has been lengthened faster than it was in World War I, but, since it was shorter to start with, it is still not so long as the average work week in 1916.

Because of these changes, "real" weekly earnings, or the purchasing value of actual weekly earnings, have risen in twenty-eight months to a level that was not equaled until five years after the close of the first World War.

Recent advances in hourly earnings compare favorably with those during World War I. This has been due more to increased rates than to higher wage payments at overtime rates.

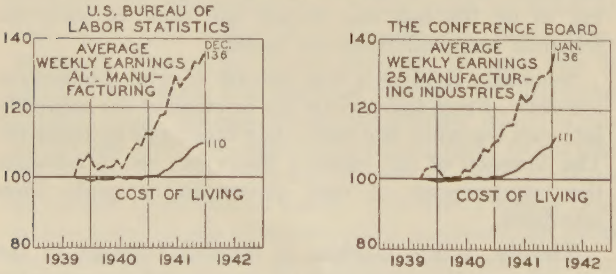
CHANGES IN WEEKLY EARNINGS

The weekly earnings of the average wage earner in twenty-five manufacturing industries, according to the compilations of THE CONFERENCE BOARD, rose 30.8% during the twenty-eight months from September, 1939, to December, 1941. In the same period, average weekly earnings of wage earners in all manufacturing industry, according to the United States Bureau of Labor Statistics, rose 36.4% (see Chart 1).

Recent monthly estimates by the Bureau of Labor Statistics[1] reveal that from July, 1914, to October, 1916, weekly earnings of wage earners in all manufacturing industry rose only 19.0% (see Chart 2). It is evident from these figures that weekly earnings have increased much more rapidly in the first twenty-eight months of the current World War than in the similar period of World War I. As shown by the figures of the Bureau of Labor Statistics, weekly earnings have already increased 92% more than they did during a similar period in the last war. Nor did a comparable increase occur in the last war until August, 1917, after thirty-eight months of war.

CHART 1: AVERAGE WEEKLY EARNINGS AND COST OF LIVING IN WORLD WAR II

Index Numbers, September, 1939=100



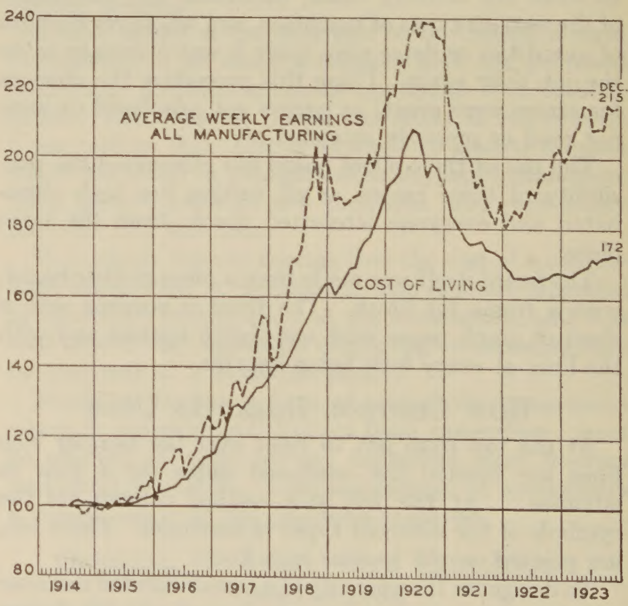
Changes in Dollars

These changes in weekly earnings may be considered from another angle. According to figures of the Bureau of Labor Statistics, average weekly earnings of wage earners in all manufacturing industry in July, 1914, were $11.47, as compared to $13.65 in October, 1916, or a net increase in the first twenty-eight months of World War I of $2.18. In World War II, from September, 1939, to December, 1941, average weekly earnings for the same group rose from $24.70 to $33.69, a net increase of $8.99. A part of these gains to the worker is offset by rises in living costs during each 28-month period, and the relative size of the recent gain should be further diminished by the increase in living costs which occurred between the two wars. Adjustments were therefore undertaken to place the comparison on the same basis. Living costs, according to the Bureau of Labor Statistics, increased 40.3% between July, 1914, and Sep-

CHART 2: AVERAGE WEEKLY EARNINGS AND COST OF LIVING, 1914 TO 1923

Source: United States Bureau of Labor Statistics

Index Numbers, July, 1914=100



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[1] Witt Bowden, "Wages and the Cost of Living in Two World Wars," United States Bureau of Labor Statistics, *Monthly Labor Review*, November, 1941. Data included in this article have been rebased so that the month in which each war began would represent 100.

tember, 1939, the beginning dates of each war. When the increase in weekly earnings in World War II is expressed in July, 1914, dollars (i. e., increase in weekly earnings in World War II divided by the index of the cost of living in September, 1939, on a July, 1914, base), the absolute increase comparable to that in the earlier period is $6.41.

A further refinement is made by adjusting the dollar increases in each period downward by the corresponding increases in the cost of living. In the first twenty-eight months of World War I, living costs rose 12.4% and, therefore, the absolute increase adjusted for changes in living costs was reduced to $1.94. When a similar adjustment is made for World War II to offset the 9.7% increase in living costs which has occurred, the increase in weekly earnings expressed in July, 1914, dollars is further reduced to $5.84.

TABLE 1: AVERAGE WEEKLY EARNINGS IN MANUFACTURING, ACTUAL AND "REAL," AND THE COST OF LIVING, SEPTEMBER, 1939–JANUARY, 1942

Index Numbers—September, 1939 = 100

Year and Month	THE CONFERENCE BOARD			United States Bureau of Labor Statistics		
	Actual Weekly Earnings[1]	Cost of Living	"Real" Weekly Earnings[2]	Actual Weekly Earnings[3]	Cost of Living	"Real" Weekly Earnings[2]
1939						
September....	100.0	100.0	100.0	100.0	100.0	100.0
October......	102.4	99.9	102.5	104.5	99.7	104.8
November....	103.3	99.6	103.7	104.2	99.5	104.7
December....	103.4	99.1	104.3	106.3	99.0	107.4
1940						
January......	101.8	99.1	102.7	103.3	98.9	104.4
February.....	100.1	99.6	100.5	102.0	99.5	102.5
March........	100.1	99.3	100.8	103.1	99.2	103.9
April.........	100.3	99.5	100.8	102.6	99.3	103.3
May.........	100.3	99.8	100.5	103.0	99.5	103.5
June.........	102.4	100.1	102.3	104.4	99.9	104.5
July..........	102.1	100.4	101.7	102.2	99.7	102.5
August.......	103.6	100.0	103.6	105.7	99.4	106.3
September....	105.1	100.4	104.7	107.4	99.8	107.6
October......	108.2	100.1	108.1	109.8	99.6	110.2
November....	107.8	100.1	107.7	109.0	99.5	109.5
December....	109.8	100.6	109.1	112.9	100.1	112.8
1941						
January......	111.0	100.7	110.2	112.3	100.2	112.1
February.....	113.9	100.8	113.0	115.7	100.2	115.5
March........	115.3	101.1	114.0	117.9	100.6	117.2
April.........	115.6	101.8	113.6	118.1	101.7	116.1
May.........	120.1	102.3	117.4	124.5	102.4	121.6
June.........	124.2	103.6	119.9	128.9	104.0	123.9
July..........	122.2	104.1	117.4	126.4	104.6	120.8
August.......	123.6	104.7	118.1	128.1	105.4	121.5
September....	127.3	106.3	119.8	129.6	107.3	120.8
October......	129.3	107.7	120.1	133.2	108.5	122.8
November....	129.6	108.8	119.1	132.8	109.4	121.4
December....	130.8	109.1	119.9	136.4	109.7	124.3
1942						
January......	136.3	110.7	123.1	.....	.....	.....

[1] 25 manufacturing industries
[2] Actual weekly earnings ÷ cost of living
[3] All manufacturing

It is evident, then, that the absolute changes in average weekly earnings of wage earners in the current war have been three times as great as those in the last war during a similar period. These raises also have three times the purchasing power of those received by manufacturing wage earners during the first twenty-eight months of World War I.

CHANGES IN COST OF LIVING

From September, 1939, to December, 1941, the cost of living in the United States, as measured by THE CONFERENCE BOARD index, rose 9.1%. During the same period, the United States Bureau of Labor Statistics' average index of the cost of living in large cities showed a 9.7% rise. Material on World War I was available only for selected dates until recently, when monthly estimates were made by the Bureau of Labor Statistics.[1] According to these estimates, living costs rose 12.4% between July, 1914, and October, 1916. This change is 36% greater than that shown by THE CONFERENCE BOARD for a similar period in this war and 28% more than that shown by the Bureau of Labor Statistics. The movement in the recent period, however, has been similar to the movement in the early part of World War I. Charts 1 and 2 illustrate these changes.

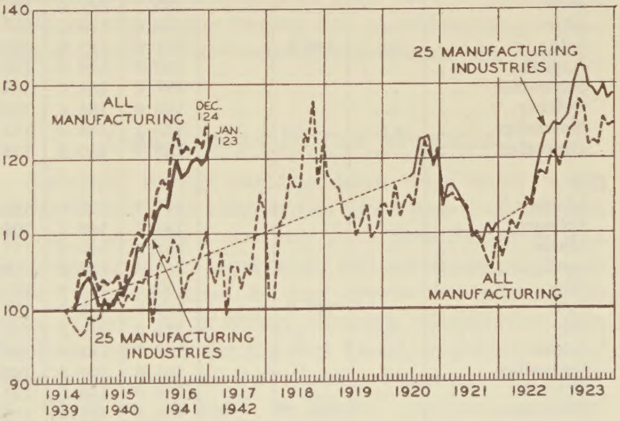
CHANGES IN "REAL" WEEKLY EARNINGS

To ascertain the purchasing value of weekly earnings, the indexes of average weekly earnings are divided by the indexes of living costs. In the first twenty-eight months of World War I, "real" weekly earnings rose only 5.9%, according to figures compiled by the Bureau of Labor Statistics.[1] This contrasts with the 24.3% rise shown by the Bureau of Labor Statistics and 19.9%

CHART 3: "REAL" WEEKLY EARNINGS, MANUFACTURING INDUSTRIES

Sources: United States Bureau of Labor Statistics; THE CONFERENCE BOARD

Index Numbers, July, 1914 = 100 and September, 1939 = 100



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[1] *Op. cit.*

TABLE 2: AVERAGE ACTUAL AND "REAL" WEEKLY EARNINGS OF WAGE EARNERS IN MANUFACTURING, AND THE COST OF LIVING, JULY, 1914-DECEMBER, 1923

Index Numbers—July, 1914=100

Year and Month	THE CONFERENCE BOARD			United States Bureau of Labor Statistics		
	Actual Weekly Earnings[1]	Cost of Living	"Real" Weekly Earnings[2]	Actual Weekly Earnings[3]	Cost of Living	"Real" Weekly Earnings[2]
1914						
July	100.0	100.0	100.0	100.0	100.0	100.0
August	.....	.....	.....	99.9	101.5	98.4
September	.....	.....	.....	99.5	102.0	97.5
October	.....	.....	.....	97.7	101.3	96.4
November	.....	.....	.....	98.3	101.4	96.9
December	.....	.....	.....	100.2	101.3	98.9
1915						
January	.....	.....	.....	99.2	100.8	98.4
February	.....	.....	.....	99.0	100.3	98.7
March	.....	.....	.....	100.9	99.4	101.5
April	.....	.....	.....	100.0	100.0	100.0
May	.....	.....	.....	101.6	100.4	101.2
June	.....	.....	.....	102.2	100.7	101.5
July	.....	99.5	.....	101.0	100.7	100.3
August	.....	.....	.....	102.8	100.8	102.0
September	.....	.....	.....	102.5	101.3	101.2
October	.....	.....	.....	106.0	102.2	103.7
November	.....	.....	.....	106.4	102.8	103.5
December	.....	.....	.....	108.5	103.2	105.1
1916						
January	.....	.....	.....	102.2	104.2	98.1
February	.....	.....	.....	110.4	104.4	105.7
March	.....	.....	.....	112.3	105.0	107.0
April	.....	.....	.....	112.4	105.9	106.1
May	.....	.....	.....	116.3	106.5	109.2
June	.....	.....	.....	116.6	107.8	108.2
July	.....	106.7	.....	109.2	107.8	101.3
August	.....	.....	.....	113.6	109.0	104.2
September	.....	.....	.....	115.9	111.0	104.4
October	.....	.....	.....	119.0	112.4	105.9
November	.....	.....	.....	124.0	114.5	108.3
December	.....	.....	.....	126.6	115.0	110.1
1917						
January	.....	.....	.....	122.4	116.3	105.2
February	.....	.....	.....	123.1	119.1	103.4
March	.....	.....	.....	128.6	119.9	107.3
April	.....	.....	.....	123.8	125.0	99.0
May	.....	.....	.....	135.1	127.9	105.6
June	.....	.....	.....	136.0	129.0	105.4
July	.....	126.6	.....	131.3	128.0	102.6
August	.....	.....	.....	136.5	129.8	105.2
September	.....	.....	.....	137.9	132.2	104.3
October	.....	.....	.....	149.0	134.6	110.7
November	.....	.....	.....	155.1	134.8	115.1
December	.....	.....	.....	153.7	136.3	112.8
1918						
January	.....	.....	.....	141.4	139.0	101.7
February	.....	.....	.....	142.7	140.7	101.4
March	.....	.....	.....	155.4	139.9	111.1
April	.....	.....	.....	158.4	141.3	112.1
May	.....	.....	.....	170.0	144.2	117.9
June	.....	147.6	.....	170.6	147.0	116.1
July	.....	.....	.....	174.5	150.3	116.1
August	.....	.....	.....	188.7	153.0	123.3
September	.....	.....	.....	191.5	156.9	122.1
October	.....	.....	.....	203.0	159.5	127.3
November	.....	159.5	.....	188.3	161.8	116.4
December	.....	.....	.....	201.0	164.6	122.1
1919						
January	.....	.....	.....	194.2	164.9	117.8
February	.....	.....	.....	188.2	161.1	116.8
March	.....	156.0	.....	189.0	162.9	116.0
1919 (*Continued*)						
April	.....	.....	.....	186.8	165.9	112.6
May	.....	.....	.....	187.4	168.0	111.5
June	.....	.....	.....	189.4	168.7	112.3
July	.....	167.0	.....	189.9	173.2	109.6
August	.....	.....	.....	195.8	176.2	111.1
September	.....	.....	.....	201.3	177.4	113.5
October	.....	.....	.....	197.1	180.3	109.3
November	.....	177.8	.....	203.6	184.4	110.4
December	.....	.....	.....	213.9	188.7	113.4
1920						
January	.....	187.8	.....	218.9	192.5	113.7
February	.....	189.6	.....	218.0	194.4	112.1
March	.....	192.7	.....	228.7	196.6	116.3
April	.....	198.2	.....	226.5	202.1	112.1
May	.....	200.3	.....	234.5	205.5	114.1
June	236.0	200.8	117.5	239.6	208.3	115.0
July	236.1	200.0	118.1	235.2	207.5	113.6
August	237.0	193.1	122.7	239.5	201.9	118.6
September	235.8	192.0	122.8	238.9	195.0	122.5
October	234.2	190.2	123.1	239.3	198.6	120.5
November	224.4	188.7	118.9	235.4	197.4	119.3
December	219.2	181.1	121.0	233.7	192.9	121.2
1921						
January	201.3	177.0	113.7	218.8	189.8	115.3
February	197.4	169.8	116.3	210.8	183.7	114.8
March	196.5	168.7	116.5	210.2	182.1	115.4
April	192.5	166.6	115.5	205.7	179.9	114.3
May	186.5	164.1	113.7	202.0	176.5	114.4
June	184.3	163.6	112.7	199.4	175.5	113.6
July	181.7	165.3	109.9	192.2	175.7	109.4
August	182.3	166.7	109.4	194.3	176.5	110.1
September	180.3	165.9	108.7	188.7	174.8	108.0
October	183.8	165.4	111.1	184.8	174.2	106.1
November	181.2	164.9	109.9	182.1	173.4	105.0
December	181.6	163.6	111.0	188.2	172.4	109.2
1922						
January	*n.a.*	160.8	*n.a.*	180.4	168.9	106.8
February	*n.a.*	160.5	*n.a.*	183.1	168.0	109.0
March	*n.a.*	157.7	*n.a.*	185.8	166.3	111.7
April	*n.a.*	158.1	*n.a.*	183.5	166.2	110.4
May	*n.a.*	158.4	*n.a.*	187.1	166.2	112.6
June	*n.a.*	158.7	*n.a.*	191.2	166.6	114.8
July	180.7	158.6	113.9	189.5	166.9	113.5
August	185.5	157.3	117.9	193.5	165.3	117.1
September	191.0	157.7	121.1	196.2	165.5	118.5
October	195.7	158.7	123.3	196.3	166.6	117.8
November	197.2	159.5	123.6	201.0	167.3	120.1
December	199.1	159.5	124.8	203.1	167.9	121.0
1923						
January	198.3	159.5	124.3	199.0	167.5	118.8
February	199.2	159.1	125.2	202.4	167.0	121.2
March	202.4	160.8	125.9	207.7	167.6	123.9
April	210.1	161.2	130.3	209.5	168.6	124.3
May	215.5	162.6	132.5	216.0	168.9	127.9
June	214.6	162.5	132.1	215.0	169.6	126.8
July	212.7	164.1	129.6	208.5	171.4	121.6
August	211.9	163.9	129.3	208.8	170.8	122.2
September	212.1	165.4	128.2	208.8	171.7	121.6
October	214.8	165.6	129.7	215.9	172.1	125.5
November	213.3	166.7	128.0	214.3	172.5	124.2
December	213.6	166.1	128.6	214.8	172.2	124.7

[1] 25 manufacturing industries

[2] Actual weekly earnings ÷ cost of living

[3] All manufacturing

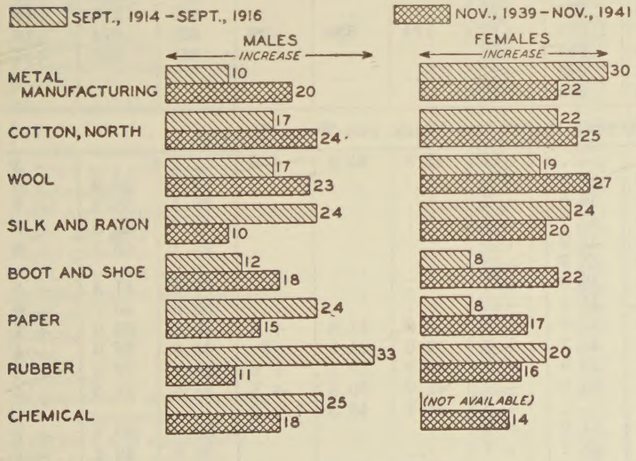
shown by The Conference Board for the corresponding period of World War II. The cause of this widespread difference is evident. The cost of living advanced more rapidly in World War I than in World War II, and weekly earnings more rapidly in World War II than in World War I. The result is that workers have experienced a far greater increase in the purchasing value of their earnings in the early part of this war than they did in the corresponding period of the last war. The changes in "real" weekly earnings are shown on Chart 3, the data for World War I being extended through 1923 to cover the entire war period and its aftermath. "Real" earnings showed a greater increase from September, 1939, to December, 1941, than was shown at any time during the last war, except for the brief peak in October, 1918. In fact, the change up to December, 1941, was as great as that for the entire period from July, 1914, to the early part of 1923, five years after the end of World War I.

CHANGES IN HOURLY EARNINGS

Comparative data on hourly earnings for the first twenty-eight months of World War I are not available. An earlier study by The Conference Board, however, covered hourly earnings for eight manufacturing industries for September, 1914, and September, 1916[1], and those data were used for the purpose of comparison. Since September, 1914, was the second month following the outbreak of the first World War, November, 1939, was selected as the comparable date for the present war. Two-year comparative changes are thus afforded, September, 1914, to September, 1916, and November, 1939, to November, 1941. Industries selected for the recent period correspond closely to those covered in the earlier study. Since information is not available on the exact composition of the metal industry in the early period[1], an arithmetic average of recent changes for the agricultural implement industry and for automobiles, foundries, machines and machine tools, heavy equipment, hardware and small parts, and other foundry products was used. The results of these comparisons are shown in Table 3 and Chart 4. These figures indicate that the percentage increases in average hourly earnings in this war compare very favorably with those in World War I.

CHART 4: HOURLY EARNINGS OF WAGE EARNERS IN MANUFACTURING

Percentage Changes, 1914–1916 and 1939–1941



Since hourly earnings in manufacturing rose on the average nearly 200% between the outbreak of World War I and World War II, equal percentage increases in hourly earnings represent far greater increases in actual dollar earnings today than they did in the last war (see Table 3).

When a cost of living adjustment has been made (similar to that made for weekly earnings, described on page 72) to put absolute comparisons on the same basis, hourly earnings for male wage earners in the metal-manufacturing industries in this war are shown to have increased four times as much as they did in the last war, instead of only twice as much.

Other large gains were shown by the cotton-North and wool industries, in which adjusted earnings showed advances which were nearly threee times as great as the absolute increases by these industries in World War I. All industries showed greater rises in World War II than in World War I except silk and rayon, and rubber, in which the absolute increases were only 80% of those shown earlier. The rubber industry, however, had the largest absolute and percentage increase in hourly earnings from July, 1914, to September, 1939, of any of the twenty-five manufacturing industries studied by The Conference Board (see Table 4).

CHANGES IN HOURS WORKED

Although weekly earnings have risen much faster so far in this war than in the same period of the first World War, such a rise may have been due more to a lengthening of the work week and accompanying overtime payments than to any appreciable advance in rates of pay. As in hourly earnings, comparative data for hours of work for the first twenty-eight months of World War I are not available. However, the study of "Wartime Changes in Wages"[2] contains material regarding hours as well as hourly earnings, and it is presented along with hourly earnings in Table 3. A period similar to that used for hourly earnings was chosen for the comparison of changes in hours in the two World Wars (see Chart 5).

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[1] "Wartime Changes in Wages," *National Industrial Conference Board Research Report*, No. 20, September, 1919.

[1] Workers covered were listed as machinists, tool makers, molders, core makers, blacksmiths, pattern makers, machine operators, assemblers, foundry labor and unskilled labor.

[2] *Op. cit.*

As might be expected, increases in hours worked have occurred in every instance in the recent period. In the last war, increases also occurred and declines were infrequent, because decreases in hours worked in the earlier period did not generally appear until after the date of the period used in this comparison. Indeed, the metal industry showed a greater increase in working time in the earlier period than in the later.

It should be remembered that the average length of the work week has declined considerably since 1914. Industrial and social factors as well as legislative action have brought about its reduction to forty hours a week, or more than 20% below the average of 51.5 hours in twenty-five manufacturing industries in July, 1941. There is a physical limit to the number of hours that a man can work in a week. This time is further reduced by holidays, sicknesses, strikes, and other work stoppages. It is very probable, therefore that in the early part of the last war wage earners in many industries were working close to the maximum number of hours and, therefore, the lengthening of their work week was limited by their physical ability to take a larger part in production. At the present time, however, with only a 40-hour week, it is quite possible to expand the work week considerably.

Under the law, such expansion requires overtime payment at a premium. Also, many union agreements calling for payment of time and a half for Saturday

TABLE 3: WARTIME CHANGES IN EARNINGS AND HOURS OF WAGE EARNERS IN MANUFACTURING SEPTEMBER, 1914, TO SEPTEMBER, 1916, AND NOVEMBER, 1939, TO NOVEMBER, 1941

Source: The Conference Board

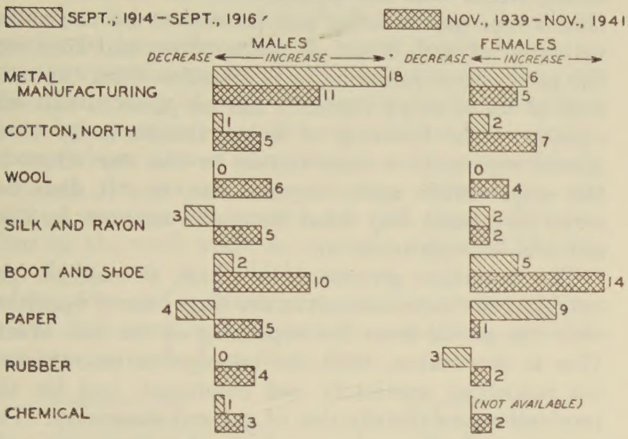
Industry	Average Hourly Earnings											
	All Male						All Female					
	September, 1914	September, 1916	Percentage Changes	November, 1939	November, 1941	Percentage Changes	September, 1914	September, 1916	Percentage Changes	November, 1939	November, 1941	Percentage Changes
Metal Manufacturing	$.289	$.317	+10	....	....	+20[1]	$.149	$.194	+30	....	....	+22[1]
Agricultural implement	....	....	....	$.806	$.937	+16	....	....	....	$.563	$.722	+28
Automobile	....	....	....	.963	1.212	+26	....	....	....	.695	.817	+18
Foundries	....	....	....	.759	.887	+17	....	....	....	.557	.675	+21
Machines and machine tools	....	....	....	.772	.915	+19	....	....	....	.513	.643	+25
Heavy equipment	....	....	....	.781	.955	+22	....	....	....	....	....	....
Hardware and small parts	....	....	....	.730	.880	+21	....	....	....	.474	.589	+24
Other foundry products	....	....	....	.786	.933	+19	....	....	....	.498	.577	+16
Cotton—North	.189	.221	+17	.542	.670	+24	.152	.186	+22	.432	.540	+25
Wool	.215	.251	+17	.647	.795	+23	.167	.199	+19	.512	.650	+27
Silk and rayon	.230	.284	+24	.592	.652	+10	.156	.193	+24	.396	.476	+20
Boot and shoe	.292	.325	+12	.598	.707	+18	.192	.207	+ 8	.420	.514	+22
Paper	.239	.295	+24	....	....	+15[1]	.177	.191	+ 8	....	....	+17[1]
Paper and pulp	....	....	....	.663	.779	+17	....	....	....	.431	.520	+21
Paper products	....	....	....	.683	.774	+13	....	....	....	.455	.511	+12
Rubber	.288	.382	+33	.967	1.071	+11	.174	.208	+20	.581	.674	+16
Chemical	.232	.289	+25	.805	.946	+18	....	....	....	.551	.628	+14
Skilled[2]	.300	.360	+20	.842	.988	+17	....	....	....	....	....	....
Unskilled[2]	.210	.252	+20	.705	.823	+17	....	....	....	....	....	....
	Average Actual Hours per Week per Wage Earner											
Metal Manufacturing	45.5	53.8	+18	....	....	+11[1]	43.3	45.8	+ 6	....	....	+ 5[1]
Agricultural implement	....	....	....	39.0	40.8	+ 5	....	....	....	39.1	39.9	+ 2
Automobile	....	....	....	36.9	39.6	+ 7	....	....	....	36.1	38.8	+ 7
Foundries	....	....	....	39.4	43.7	+11	....	....	....	36.6	39.0	+ 7
Machines and machine tools	....	....	....	44.4	50.2	+13	....	....	....	42.1	43.1	+ 2
Heavy equipment	....	....	....	39.6	45.9	+16	....	....	....	....	....	....
Hardware and small parts	....	....	....	41.4	46.0	+11	....	....	....	39.2	41.3	+ 5
Other foundry products	....	....	....	40.5	45.4	+12	....	....	....	38.3	40.7	+ 6
Cotton—North	52.9	53.5	+ 1	39.9	41.8	+ 5	50.9	51.8	+ 2	36.2	38.8	+ 7
Wool	53.8	54.0	0	38.5	40.7	+ 6	52.0	51.8	0	35.6	36.9	+ 4
Silk and rayon	51.2	49.6	− 3	37.2	38.9	+ 5	48.2	49.2	+ 2	36.7	37.3	+ 2
Boot and shoe	50.3	51.1	+ 2	34.4	38.0	+10	47.9	50.5	+ 5	31.6	35.9	+14
Paper	53.3	51.0	− 4	....	....	+ 5[1]	42.3	46.3	+ 9	....	....	+ 1[1]
Paper and pulp	....	....	....	42.3	44.0	+ 4	....	....	....	39.2	39.4	+ 1
Paper products	....	....	....	41.4	43.5	+ 5	....	....	....	38.9	39.2	+ 1
Rubber	48.8	48.7	0	37.5	38.9	+ 4	53.2	51.6	− 3	36.8	37.4	+ 2
Chemical	55.5	55.8	+ 1	40.0	41.2	+ 3	....	....	....	39.0	39.6	+ 2
Skilled[2]	57.8	58.0	0	40.2	41.3	+ 3	....	....	....	....	....	....
Unskilled[2]	54.5	54.6	0	39.4	40.9	+ 4	....	....	....	....	....	....

[1] Arithmetic average

[2] Based on a smaller sample

CHART 5: HOURS WORKED BY WAGE EARNERS IN MANUFACTURING

Percentage Changes, 1914–1916 and 1939–1941



work and double time for Sunday and holiday work require such bonus payments when a plant is operating on a seven-day week, even though certain of the workers receiving the bonuses may work less than forty hours a week. The effect of these overtime payments on the average hourly earnings of wage earners will be discussed later. The current increase in working hours should not be considered an abnormal expansion of the work week but rather the return to what might be considered a normal level when greater production is required.

CHANGES BETWEEN TWO WARS

The recent advances in earnings, hours and the cost of living are even more favorable to the working man in view of the changes which have occurred between 1914 and 1939. Chart 6 and Table 4 illustrate such changes.

Between July, 1914, and September, 1939, average hourly earnings in the twenty-five manufacturing industries regularly surveyed by THE CONFERENCE BOARD rose 192%; since September, 1939, they have risen another 20%. For the first of these periods, hours worked declined 26%; for the second they increased 9%. The net result of these changes in hourly earnings and hours was to raise average weekly earnings first 118%, then an additional 31%. The comparable increases in the cost of living were only 39% and 9%. Obviously, therefore, the worker's earning power had been greatly improved up to the beginning of World War II, and has since been further improved.

Since these changes were accompanied by relatively modest advances in living costs, the standard of living has been greatly improved. This improvement in living standards has been and continues to be one of the outstanding results of the free enterprise system in

TABLE 4: CHANGES IN EARNINGS AND HOURS OF WAGE EARNERS—JULY, 1914, TO SEPTEMBER, 1939

Source: THE CONFERENCE BOARD

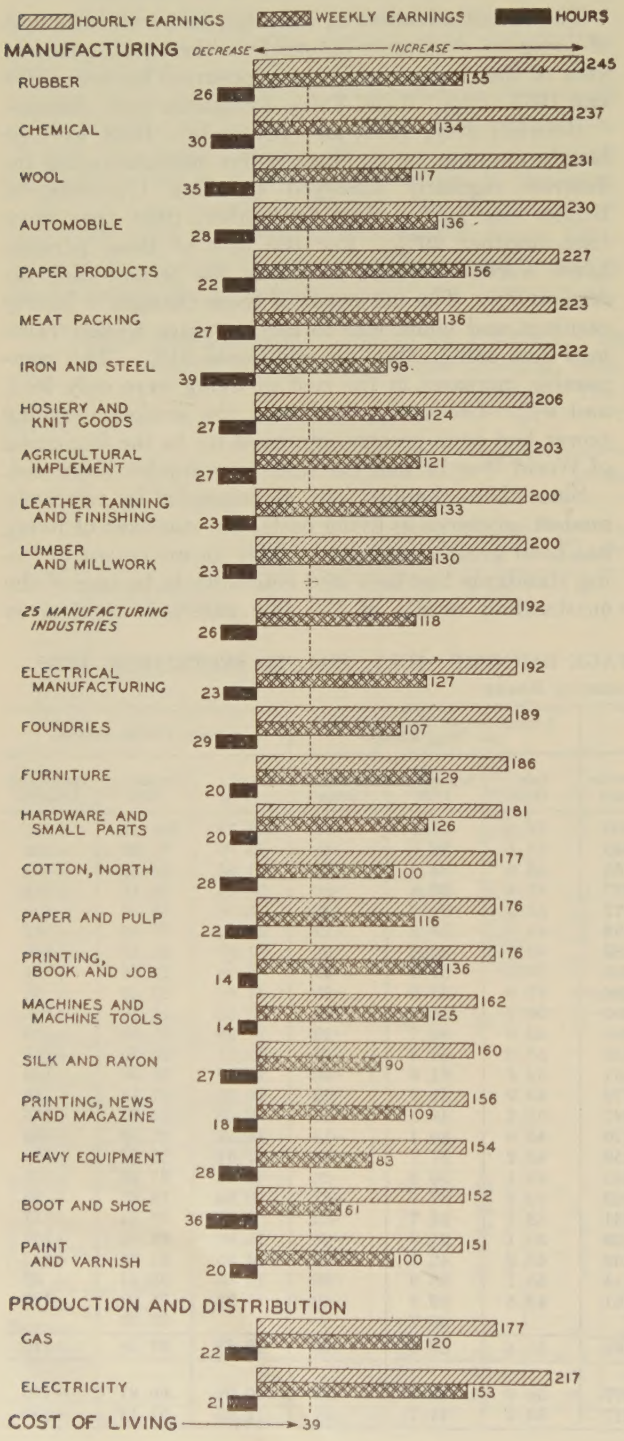
Industry	Average Hourly Earnings			Average Actual Hours per Week per Wage Earner			Average Weekly Earnings		
	July, 1914	September, 1939	Percentage Changes	July, 1914	September, 1939	Percentage Changes	July, 1914	September, 1939	Percentage Changes
Agricultural implement	$.265	$.803	+203	52.0	37.9	−27	$13.78	$30.46	+121
Automobile	.293	.968	+230	51.4	36.8	−28	15.09	35.62	+136
Boot and shoe	.212	.534	+152	53.6	34.2	−36	11.34	18.26	+ 61
Chemical	.225	.758	+237	57.2	39.8	−30	12.88	30.16	+134
Cotton—North	.176	.487	+177	51.9	37.6	−28	9.16	18.32	+100
Electrical manufacturing	.272	.794	+192	49.8	38.6	−23	13.52	30.66	+127
Furniture	.232	.663	+186	49.9	40.0	−20	11.57	26.53	+129
Hosiery and knit goods	.178	.545	+206	50.8	37.2	−27	9.04	20.25	+124
Iron and steel	.263	.846	+222	57.0	35.0	−39	14.96	29.61	+ 98
Leather tanning and finishing	.217	.652	+200	50.1	38.8	−23	10.88	25.30	+133
Lumber and millwork	.224	.672	+200	53.0	40.7	−23	11.89	27.38	+130
Meat packing	.215	.694	+223	55.8	40.8	−27	12.01	28.35	+136
Paint and varnish	.289	.724	+151	52.5	41.9	−20	15.19	30.36	+100
Paper and pulp	.233	.642	+176	53.9	42.2	−22	12.56	27.12	+116
Paper products	.187	.611	+227	51.6	40.5	−22	9.68	24.76	+156
Printing—book and job	.302	.833	+176	46.8	40.1	−14	14.12	33.38	+136
Printing—news and magazine	.378	.966	+156	46.2	37.7	−18	17.44	36.46	+109
Rubber	.250	.862	+245	49.1	36.2	−26	12.28	31.26	+155
Silk and rayon	.196	.510	+160	50.8	37.0	−27	9.94	18.87	+ 90
Wool	.182	.603	+231	53.1	34.7	−35	9.63	20.94	+117
Foundries	.258	.745	+189	50.1	35.8	−29	12.92	26.69	+107
Machines and machine tools	.287	.752	+162	48.9	42.1	−14	14.05	31.64	+125
Heavy equipment	.308	.783	+154	54.1	38.9	−28	16.65	30.44	+ 83
Hardware and small parts	.238	.668	+181	49.5	39.8	−20	11.78	26.61	+126
Other foundry products	.....	.732	....	....	38.7	....	....	28.36	....
25 Manufacturing industries	.247	.722	+192	51.5	38.2	−26	12.68	27.58	+118
Production and distribution of									
Gas	.270	.749[1]	+177	52.0	40.6[1]	−22	14.01	30.81[1]	+120
Electricity	.278	.882[1]	+217	52.8	41.7[1]	−21	14.68	37.12[1]	+153

[1] July, 1939

CHART 6: EARNINGS AND HOURS OF WAGE EARNERS AND COST OF LIVING

Source: THE CONFERENCE BOARD

Percentage Changes, July, 1914 to September, 1939



this country. A certain amount of emphasis is currently being placed upon the lowering of standards of living which will accompany the war effort. While this is true and is being put into effect by the actual rationing of such items as automobiles and tires and the prospective rationing or elimination from the markets of many other items, it has no place in this discussion. The lowering of living standards by these means represents a contribution to the war effort by the wage earner and everyone else, but it does not mean he cannot buy what he wants because he does not earn enough to do so.

The statistics presented in Chart 6 measure the extent of the improvement in the wage earner's position over the period from the beginning of the last World War to September, 1939, for twenty-five manufacturing industries separately and combined, and for the production and distribution of gas and electricity. The industries showing the greatest advances in hourly earnings were: Rubber, chemicals, wool, automobiles, paper, meat packing, and iron and steel, all showing rises in excess of 220%. The industries showing the greatest reduction in actual hours per week from July, 1914, to September, 1939, were: Iron and steel, wool, boot and shoe, and chemical industries, all showing declines of more than 30%. The net result of all these changes, as reflected in average weekly earnings, led to advances of 130% or more made from July, 1914, to September, 1939 in the following industries: Paper products, rubber, electricity, meat packing, automobile, printing—book and job, chemical, leather tanning, and lumber and mill work. The greatest rise in weekly earnings, of 156%, occurred in the paper products industry as a result of the 227% increase in hourly earnings from $.187 to $.611, and the relatively small decline in hours worked, 22%, from 51.6 to 40.5.

EFFECT OF OVERTIME PAYMENTS ON EARNINGS

The information collected by THE CONFERENCE BOARD each month for use in its survey of earnings and hours in twenty-five manufacturing industries[1] does not provide a basis for exact comparisons of earnings of workers who worked overtime with those who did not. A re-analysis of these data, however, does afford certain significant comparisons.

Data applicable to all male wage earners for the eight industries, previously discussed in connection with changes in hourly earnings and hours worked in two wars, were completely reviewed for the months of November, 1939, and November, 1941, in order to determine, insofar as possible, the proportion of the increase in hourly earnings that occurred over the period which was due to overtime and other incentive payments and that which was due to increases in rates of pay. Reports for each period were divided into two groups, those showing overtime on the average and those showing no overtime. Such a division must necessarily be imperfect since a report which shows no average overtime may be based upon the working time of a small group of wage earners who worked overtime plus a larger group of workers who did not. Conversely, reports which showed no average overtime undoubtedly included the actual time of some individuals who worked overtime. In accordance with the legal limitations on the work week, an overtime report in November, 1939, was one which showed average hours in excess of 44 and in November, 1941, in excess of 40.

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[1] The questionnaire forms ask for total payrolls including overtime payments and other incentive compensation and total hours worked. Hence, they provide no means for segregating regular pay and regular hours.

The following comparisons for identical establishments were made from these data:

November, 1939	*November, 1941*
No overtime	No overtime
No overtime	Overtime
Overtime	Overtime

Since so few reports were available which showed a change from overtime to no overtime, over this period, this particular comparison was eliminated. The results of these calculations are presented in the following table.

TABLE 5: CHANGES IN HOURLY EARNINGS OF MALE WAGE EARNERS IN EIGHT INDUSTRIES, NOVEMBER, 1939–NOVEMBER, 1941

Source: THE CONFERENCE BOARD

In Per Cent

Industry	From No Overtime to No Overtime	From No Overtime to Overtime	From Overtime to Overtime
Metal Manufacturing			
Agricultural implement	+18.2	+14.2	+24.8[a]
Automobile	+16.6	+18.5	+21.5
Foundries	+12.9	+17.7	+13.3
Machines and machine tools	+13.7[a]	+14.0	+21.7
Heavy equipment	+20.6[a]	+22.4	+14.9
Hardware and small parts	+19.1[a]	+19.9	+20.2
Other foundry products	+ 9.7	+21.4	+33.5
Cotton—North	+23.2	+23.8	[b]
Wool	+19.3	+12.9	[b]
Silk and rayon	+ 6.5	+13.4	+ 4.1[a]
Boot and shoe	+18.6	+19.6	+24.4[a]
Paper			
Paper and pulp	+18.9	+16.3	+18.5
Paper products	+22.5	+11.0	+10.7
Rubber	+ 9.3	+14.6	+23.3[a]
Chemical	+18.8	+18.8	+13.7[a]

[a] Relatively small proportion of total sample for the industry [b] No reports

The marked similarity between the changes shown in the first and second columns of this table, and the fact that such differences as exist vary first in one direction and then in the other, clearly point to the probability that the increases in hourly earnings between November, 1939, and November, 1941, were due far more to advances in wage rates than to payments for overtime and other incentives. The fact that many plants have followed a policy of giving work to additional employees, of operating on more than one shift, and of attempting to keep individual workers within a 40-hour week, further strengthens this deduction.

Although a number of the percentage changes in hourly earnings of plants which showed average overtime in both periods (the last column) are larger than the others, the whole picture is somewhat confused. The evidence in this instance also points to the greater importance of wage-rate increases. A summary of such increases for all twenty-five manufacturing industries since July, 1940, is presented on page 82.

CONCLUSION

Although the data presented in this article represent a combination of statistically accurate measurements and of reasonable approximations, conclusions can be reached as to the earning power of wage earners in the two World War periods, particularly with reference to the workers in manufacturing industry. These conclusions are summarized as follows:

1. Percentagewise, weekly earnings have risen nearly twice as much so far in the current war as they did in the like period of World War I.

2. The increase in dollar weekly earnings, adjusted for all changes in living costs and placed on a comparable basis, has trebled.

3. Living costs in World War II have risen somewhat less than in World War I.

4. "Real" weekly earnings in December, 1941 had already shown as great an increase as was recorded by the early part of 1923, five years after World War I.

5. Changes in hourly earnings for eight industries over comparable two-year periods in both wars are similar. When converted to a dollar basis and so adjusted for changes in living costs as to be made comparable, the changes in hourly earnings in World War II are greater than those in World War I.

6. Hours worked in eight industries have risen more, percentagewise, in the recent period but are still less than in the early period. In fact, the 40-hour week is 20% less than the average work week in July, 1914.

7. Between the beginning dates of the two wars, hourly earnings in twenty-five manufacturing industries rose 192%, hours worked declined 26%, weekly earnings increased 118%, but living costs advanced only 39%.

8. An analysis of hourly earnings in eight industries reveals a preponderance of evidence that the increase in such earnings in the second World War, which compares favorably with that in the first World War, has been due, in the main, to increases in wage rates.

ROBERT A. SAYRE
Assisted by G. CLARK THOMPSON
Division of Industrial Economics

The Conference Board
Management Record

FOUNDED 1916

MARCH, 1942

FACT AND COMMENT

The Wage Issue

Still the object of violent controversy, still the center of a constant tug-of-war, the wage issue continues to bedevil those who must deal with the practical application of wage policy and those who foresee and are trying to avert the calamitous effects of an uncontrolled upward wage movement on the war effort. War necessity, political considerations, human acquisitiveness, government planning, union strategy, management policy—all play their parts in the push and pull that keeps the wage problem in a state of suspense, while comparatively little attention seems to be paid to the facts that ought to be rather important.

The United States Department of Labor and The Conference Board have for years carried on nationwide surveys of wages and living costs. These series should indicate what changes have taken place in the worker's economic status in the year and a half since June, 1940, when the United States began to gird itself for war. They should indicate the need, or lack of it, for continued wage increases. Department of Labor figures show that in manufacturing industries the following increases occurred between June, 1940, and December, 1941:

Average hourly earnings	17%
Average weekly earnings	31%
Cost of living	10%

Figures for January, 1942, are available in The Conference Board series, and from June, 1940, to January, 1942, the following increases are recorded:

Average hourly earnings	19%
Average weekly earnings	33%
Cost of living	11%

So speaks the record. Each series verifies the other. No computing machine is needed to indicate that labor's real earnings—purchasing power—have increased substantially during this period of preparation for defense. Even the most casual inspection of the figures shows how baseless is any claim that wages must continue to rise in order to maintain a reasonable standard of living for the worker. It may be true that inequitable wage conditions exist in individual instances or industries, although these wage series include a wide range of industries. But there certainly seems small justification for further wage increases in those concerned with war production.

Organized labor does not believe that wage advances should be halted. On January 26, the CIO executive board advised all affiliated unions to press for substantial wage increases when contracts came up for renewal, because companies were making outrageous profits. In two important industries, steel and automobiles, a rise of $1.00 a day has been proposed. The AFL has taken a more conservative stand. On February 14, it suggested that wages be tied to the cost of living index, with monthly adjustments to conform to cost of living changes.

The wage question is mired in politics. Congress was hastily adjourned to prevent apparently certain adoption of the Smith amendment to the second war powers bill which would have removed the requirement to pay time and one-half after 40 hours' work in one week from 17 federal statutes for the duration. The effectiveness of an appeal to "reason" by the Administration "whips" became apparent the next morning when the amendment was snowed under, 226 to 62.

Price Administrator Henderson, speaking before the National Farm Institute, opposed any further general increase in wages, as well as any increase in the prices of farm products. He pointed out the dangers of increasing purchasing power while the stock of goods available for purchase will be steadily diminishing, and said:

> Accordingly I have made representations to the War Labor Board that in view of the supply situation which

> faces us any general increase in basic wage rates will compound an already difficult problem in the price field . . . The principle of adjusting wages to the cost of living should in my opinion be limited to those workers who are really on a sub-standard level. The spread between the wages in this group and the wages of the better paid, better organized workers should be reduced. If wage increases are permitted according to bargaining power, this spread will be increased . . .

It was thought that the National War Labor Board might anticipate the submission of cases involving wage increases by announcing a general policy by which it intended to be guided in wage matters. No such statement of policy has yet appeared, but considerable significance has been attached to the Board's decision in the Phelps Dodge case, in which it refused to disturb a local condition of wage stability by granting the wage increase demanded. Dr. George Taylor, Deputy Chairman, writing the decision that was concurred in unanimously, said in part:

> Of foremost consideration, moreover, is the necessity for recognizing the urgency of increasing the volume of copper production and of minimizing unnecessary conflicts between labor organizations. A conclusion of the National War Labor Board in this case which would have the principal effect of slowing up production through the creation of artificial competition between the unions on the scene would be a sorry reply to the pleas of our fighting men for equipment with which to defend their lives.

The pending case of the Steel Workers Organizing Committee, featured by a demand on "little steel" for an increase of $1.00 a day, has attracted widespread attention because of the feeling that the decision in this case, whatever it may be, will go far toward setting the pattern that is likely to be followed by the Board in subsequent cases.

While a statement of wage policy by the War Labor Board was being awaited, Mr. W. M. Leiserson of the National Labor Relations Board questioned whether the War Labor Board could or should determine such a policy. He pointed out that the Board had been provided no guiding policy on which to base its judgment, and expressed the belief that on such a fundamental issue no governmental policy should be left to an arbitration board but should be formulated by Congress or the President.

So far, neither Congress nor the President has shown any discernible enthusiasm for a definite national wage policy. With no policy emerging from a responsible and authoritative source, the wage issue is still in suspense, still an unsettling factor in labor relations, still a threat to maximum war production, and still a stimulant to disastrous inflation.

Here and Over There

At this stage of the war, continuous production is of paramount importance. The civilian worker is just as important a factor as a soldier or sailor in the struggle for survival and for eventual victory.

Organized labor has declared for fullest cooperation in the war effort. But in California, shipbuilding labor working on vitally needed destroyers, refused to work a 10-hour shift and insisted on quitting after eight hours because the latter schedule was called for in a union contract. In New Jersey, shipbuilding welders struck because of profane and abusive language used by a foreman.

War is war. Comparisons between civilian and service conditions may be odious, but it is none the less true that those who hold the front lines for all of us do not quit after eight hours of duty. And if buck privates tossed down their rifles and stopped their ears every time a top sergeant's language became really torrid and picturesque, we at home might as well abandon hope of either victory or survival.

Monthly Review of Labor Statistics January-February, 1942

RECENT UPWARD trends in the labor statistics applicable to wage earners in twenty-five manufacturing industries continued in January. Hourly earnings, including payments for overtime and incentives, averaged $.882, the highest yet recorded for this series. The December-to-January increase amounted to 1.6% and represented the twenty-fifth successive advance in this series. The average number of hours worked per week per wage earner in January stood at 42.4, the longest work week recorded since July, 1933. Overtime per worker in the twenty-five manufacturing industries averaged 2.4 hours. The nominal work week in January was 40.9 hours.

These increases in hourly earnings and in the length of the work week in January resulted in the highest average weekly earnings yet recorded, $37.59, or a 4.2% increase over weekly earnings in December. Adjusted for the 1.4% rise in living costs which occurred between December and January, the rise in "real" earnings amounted to 2.7%. The index of real weekly earnings in twenty-five manufacturing industries reached 149.5 (1923 = 100) in January. This was a 24.0% increase over September, 1939, the first month of World War II, and a 20.5% increase over June, 1940, the month in which the defense program was inaugurated in this country.

The indexes of employment, payrolls, and man hours worked in these twenty-five manufacturing industries have likewise shown material increases. The many wage-rate advances which have been put into effect over the last two years, the recent payments for overtime work, and the greater use of incentive compensation have all contributed to a sharp advance in payrolls. The total for January was 79.3% more than it was in 1923 and 95.3% more than in September, 1939.

WAGE-RATE INCREASES

Between December and January, wage-rate increases and the number of workers affected showed little change, as indicated by the accompanying table. Certain aspects of the significance of these wage-rate increases are discussed in the article on page 72.

WAGE-RATE INCREASES AND WORKERS AFFECTED

Date	All Manufacturing[1]		25 Manufacturing Industries[2]	
	Wage Earners Affected	Wage-Rate Increase	Wage Earners Affected	Wage-Rate Increase
1940				
July	...	...	1.6%	2.6%
August	0.5%	6.6%	0.8	4.2
September	0.6	6.7	0.8	3.8
October	0.6	7.0	1.0	4.0
November	1.4	5.5	3.7	4.5
December	1.1	6.3	7.1	2.8
1941				
January	3.0	4.9	2.1	5.8
February	1.1	6.1	1.7	5.1
March	1.6	6.7	2.1	6.8
April	11.7	9.6	10.3	8.0
May	10.1	8.9	11.2	8.4
June	10.2	9.1	12.8	7.9
July	6.6	8.5	8.0	7.8
August	3.8	7.3	5.9	6.1
September	5.5	9.0	7.2	7.1
October	5.1	8.7	4.1	7.0
November	2.2	8.0	4.3	6.4
December	*n.a.*	7.4	3.5	6.8
1942				
January	*n.a.*	*n.a.*	3.7	6.1

[1] United States Bureau of Labor Statistics

[2] THE CONFERENCE BOARD

n.a. Not available

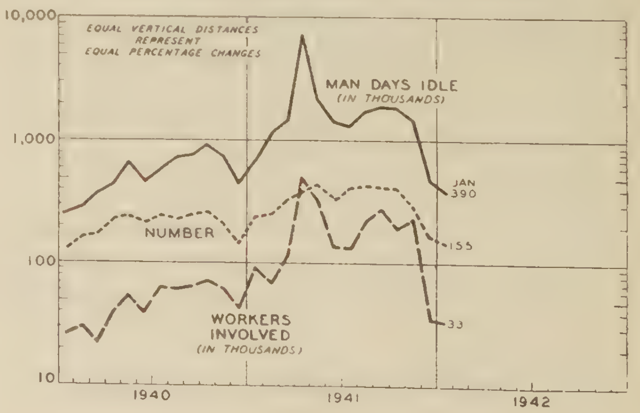
Hosiery and knit goods workers and those engaged on heavy equipment, machines, machine tools, and paper products on the average received the largest wage-rate increases in January, amounting to more than 8%. According to the reports received by THE CONFERENCE BOARD, relatively few workers were affected by the increases in the hosiery and knit goods and heavy equipment industries. Many more workers benefited from the raises granted by the paper and pulp industry and by boots and shoes, and paper products.

LABOR DISPUTES

As was expected, the entry of the United States into war early in December resulted in a sharp decline in

INDUSTRIAL DISPUTES

Source: United States Bureau of Labor Statistics



labor disputes. Various means were taken to solve these without involving work stoppages. These developments have been discussed in "Strikes and Turnover Rates" in previous issues of this publication. The accompanying chart shows the sharp decline which occurred in December and the further decline in January in the number of strikes originating in each month, the number of workers involved, and the total man days of idleness because of all strikes. It also compares these levels with the trends throughout 1940 and 1941. The number of strikes begun in January was the smallest since December, 1940, and the number of workers involved and total man days of idleness were the least since March, 1940.

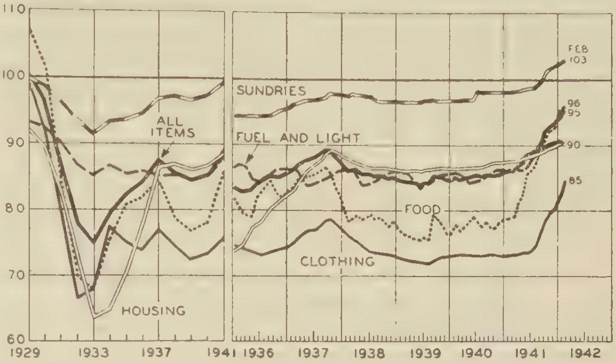
However, preliminary data gleaned from press reports in February reveal that the machinery for settling labor disputes is not working too smoothly. The table on page 96 lists a sizable number of labor disputes beginning in February, especially in defense plants. In most instances, although they were of short duration, they involved large numbers of workers. In the "all-out" war effort, many plants are now working on a capacity basis, using three shifts. Any loss in man days of work, therefore, is irreplaceable and the apparent tendency for labor disputes to increase is vitally significant.

The Cost of Living

Living costs continued their upward movement by advancing 0.7% in February over the January level. Among the various budgetary items, prices of clothing showed the greatest increase, rising 2.5%. Food prices rose only 0.6% between the two months and the other items in the budget showed only fractional changes.

Cost of Living in the United States

Index Numbers, 1923 = 100



The following table, which shows the January-to-February percentage changes in the cost of living in 67 cities, indicates that the majority of increases were considerably smaller than those recorded last month. Furthermore, declines were evident in three instances.

R. A. S.

PERCENTAGE CHANGES IN THE COST OF LIVING IN 67 CITIES JANUARY TO FEBRUARY, 1942

Source: The Conference Board

City	Percentage Change	City	Percentage Change	City	Percentage Change	City	Percentage Change
New Orleans	+1.7	Newark	+0.9	Grand Rapids	+0.5	Syracuse	+0.3
Manchester, N. H.	+1.6	Omaha	+0.9	Kansas City, Mo.	+0.5	Buffalo	+0.2
Trenton, N. J.	+1.6	Indianapolis	+0.8	Lewistown, Pa.	+0.5	Duluth	+0.2
Minneapolis	+1.3	Memphis	+0.8	Oakland	+0.5	Rochester	+0.2
Erie, Pa.	+1.2	Richmond	+0.8	Providence	+0.5	Denver	+0.1
Macon	+1.2	Birmingham	+0.7	Saginaw, Mich.	+0.5	Flint, Mich.	+0.1
Toledo	+1.2	Houston	+0.7	Anderson, Ind.	+0.4	Milwaukee	+0.1
Boston	+1.1	Lynn	+0.7	Chattanooga	+0.4	Rockford, Ill.	+0.1
Cincinnati	+1.1	New Haven	+0.7	Chicago	+0.4	St. Paul	+0.1
Dallas	+1.1	Pittsburgh	+0.7	Front Royal, Va.	+0.4	Wilmington, Del.	+0.1
Fall River	+1.1	St. Louis	+0.7	Joliet, Ill.	+0.4	Meadville, Pa.	0
Parkersburg, W. Va.	+1.1	Bridgeport	+0.6	Akron	+0.3	Muskegon	0
Portland, Ore.	+1.1	Evansville, Ind.	+0.6	Cleveland	+0.3	Spokane	0
Detroit	+1.0	Roanoke, Va.	+0.6	Lansing	+0.3	Sacramento	−0.2
New York	+1.0	Youngstown	+0.6	Los Angeles	+0.3	San Francisco	−0.5
Wausau, Wis.	+1.0	Atlanta	+0.5	Philadelphia	+0.3	Des Moines	−0.6
Louisville	+0.9	Baltimore	+0.5	Seattle	+0.3		

Earnings, Hours, Employment and Payrolls in Manufacturing

AVERAGE HOURLY and weekly earnings and payrolls in twenty-five manufacturing industries were at new peak levels in January according to THE CONFERENCE BOARD survey of labor statistics. Employment was only slightly below the high point of November, 1941, and there were more man hours worked than in any month since July, 1920.

EFFECTS OF WORLD WAR II ON EMPLOYMENT AND WAGES

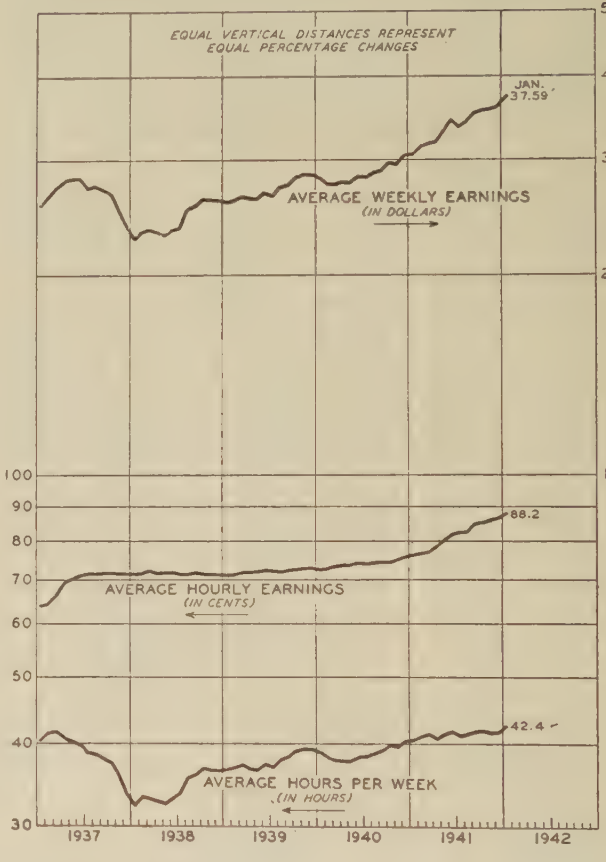
The last two and a half years can be divided into three major periods for purposes of labor statistics: From the outbreak of the war in Europe to the initiation of the lend-lease and defense program; from then until our entry into the war; and the current period in which industry is being geared to a program of production greater than any before in the history of the world.

First Period

During the first period, from August, 1939, to May, 1940, employment and average hourly earnings showed a general upward trend. Average hourly earnings of manufacturing wage earners rose 2.4% over this period, or slightly less than 0.3% per month. These advances were principally due to wage-rate increases, since, on the average, no overtime payments were called for during the period. The length of the average work week declined from 37.9 hours in August, 1939, to 37.5 hours in May, 1940.

As a result, average weekly earnings increased only

EARNINGS AND HOURS IN 25 INDUSTRIES



EARNINGS, HOURS, EMPLOYMENT AND PAYROLLS

All Wage Earners, 25 Manufacturing Industries

NOTE: *Hourly earnings are not wage rates because they include overtime and incentive payments*

Date	Average Hourly Earnings	Average Weekly Earnings	Average Actual Hours per Week per Wage Earner	Average Nominal Hours per Week per Wage Earner	Index Numbers, 1923=100							
					Hourly Earnings		Weekly Earnings		Actual Hours per Week per Wage Earner	Employment	Total Man Hours	Payrolls
					Actual	Real	Actual	Real				
1941 February	$.764	$31.41	41.0	40.3	141.2	164.0	118.0	137.0	83.3	110.2	91.8	130.0
March	.769	31.80	41.2	40.3	142.1	164.7	119.5	138.5	83.7	112.4	94.1	134.3
April	.784	31.89	40.7	40.3	144.9	166.7	119.8	137.9	82.7	115.9	95.8	138.8
May	.799	33.12	41.3	40.4	147.7	169.0	124.5	142.4	83.9	118.1	99.1	147.0
June	.818	34.26	41.7	40.5	151.2	170.8	128.7	145.4	84.8	120.7	102.4	155.3
July	.822	33.70	41.0	40.5	151.9	170.9	126.6	142.4	83.3	122.3	101.9	154.8
August	.828	34.10	41.2	40.6	153.0	171.1	128.1	143.3	83.7	123.0	103.0	157.6
September	.845	35.10	41.6	40.6	156.2	172.0	131.9	145.3	84.6	125.3	106.0	165.3
October	.853	35.65	41.7	40.6	157.7	171.4	134.0	145.7	84.8	126.7	107.4	169.8
November	.860	35.74	41.5	40.6	159.0	171.2	134.3	144.6	84.3	127.4	107.4	171.1
December	.868	36.08	41.6	40.7	160.4	172.1	135.6	145.5	84.6	126.8	107.3	171.9
1942 January	.882	37.59	42.4	40.9	163.0	172.5	141.3	149.5	86.2	126.9	109.4	179.3

EARNINGS AND HOURS, ALL WAGE EARNERS, JANUARY, 1942

NOTE: *Hourly earnings are not wage rates because they include overtime and incentive payments*

Industry	Average Earnings				Average Hours per Week per Wage Earner			
	Hourly		Weekly		Actual		Nominal	
	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.
Agricultural implement	$.953	$.943	$39.44	$36.91	41.4	39.1	40.1	40.0
Automobile[1]	1.260	1.186	52.29	41.27	41.5	34.8	40.2	40.1
Boot and shoe	.631	.631	25.22	24.20	40.0	38.3	40.6	40.6
Chemical	.926	.917	38.40	37.89	41.5	41.3	40.0	40.1
Rayon and allied products	.844	.836	33.14	32.69	39.3	39.1	40.0	40.0
Cotton—North	.616	.613	25.39	25.09	41.2	40.9	40.3	40.3
Electrical manufacturing	.975	.953	44.11	42.06	45.2	44.1	41.0	40.3
Furniture[2]	.812	.796	33.91	34.03	41.8	42.8	40.9	41.0
Hosiery and knit goods	.612	.606	22.89	23.09	37.4	38.1	40.2	40.0
Iron and steel[3]	.991	.999	38.75	38.26	39.1	38.3	41.2	41.1
Leather tanning and finishing	.768	.760	31.57	31.76	41.1	41.8	41.7	41.6
Lumber and millwork	.839	.838	34.53	34.27	41.2	40.9	40.6	40.6
Meat packing	.804	.793	32.00	31.34	39.8	39.5	39.9	40.0
Paint and varnish	.838	.845	34.03	34.99	40.6	41.4	40.0	40.0
Paper and pulp	.778	.765	33.96	33.37	43.6	43.6	40.7	40.6
Paper products	.718	.707	29.21	29.38	40.7	41.6	40.1	40.1
Printing—book and job	.859	.854	35.49	35.71	41.3	41.8	39.8	39.8
Printing—news and magazine	.977	1.013	37.83	40.14	38.7	39.6	39.7	39.7
Rubber	.972	.968	37.08	36.80	38.2	38.0	38.3	38.4
1. Rubber tires and tubes	1.108	1.106	39.77	39.34	35.9	35.6	37.5	37.6
2. Other rubber products	.817	.814	33.57	33.50	41.1	41.2	39.5	39.5
Silk and rayon	.621	.607	23.89	23.25	38.5	38.3	40.2	40.0
Wool	.752	.749	29.99	30.36	39.9	40.5	40.0	40.0
1. Woolen and worsted goods	.738	.733	29.94	30.02	40.6	41.0	40.0	40.0
2. Other woolen products[4]	.775	.776	30.05	30.88	38.8	39.8	40.0	40.0
Foundries and machine shops	.943	.921	45.27	43.60	48.0	47.3	42.4	41.9*r*
1. Foundries	.912	.896	40.86	40.23	44.8	44.9	41.4	41.0*r*
2. Machines and machine tools	.933	.918	47.93	46.81	51.4	51.0	44.3	43.1
3. Heavy equipment	1.001	.983	48.75	46.83	48.7	47.7	42.9	42.6
4. Hardware and small parts	.866	.845	40.00	38.63	46.2	45.7	41.5	41.4
5. Other products	.949	.922	44.89	42.65	47.3	46.2	41.5	41.2
25 INDUSTRIES	$.882	$.868	$37.59	$36.08	42.4	41.6	40.9	40.7
Cement	$.758	$.762	$29.62	$30.60	39.1	40.2	39.6	39.6
Petroleum refining	1.139	1.131	42.21	41.72	37.1	36.9	36.7	36.7
27 INDUSTRIES	$.885	$.871	$37.60	$36.12	42.3	41.5	40.8	40.7

See footnotes on page 89

1.4%, and were $27.67 at the end of the period as compared with $27.29 at the beginning. Since the cost of living in these nine months kept step with weekly earnings, each rising 1.4%, "real" weekly earnings remained unchanged. Employment rose 11.2%, so that, despite fewer hours worked per week, total man hours worked increased 10%. Larger weekly earnings and increased employment advanced total payrolls 12.6%.

Second Period

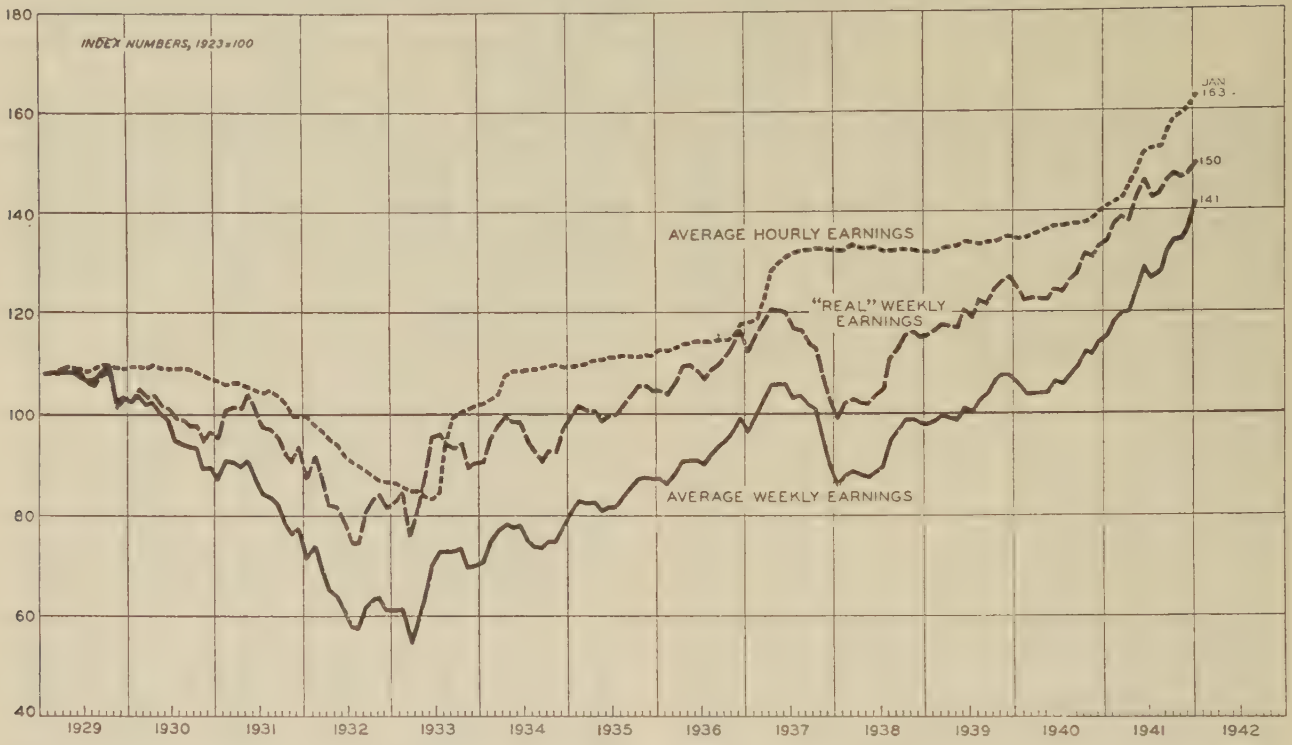
Hourly earnings continued to rise in the eighteen months from May, 1940, to November, 1941. Increasing almost 1% per month, they were 16.7% more at the end of the period, when they averaged $.860. Although overtime payments were responsible for some part of this rise, the major portion undoubtedly resulted from wage-rate increases. The average work week consisted of 41.5 hours, as compared with the 37.5 hours worked in May, 1940, a rise of 10.7%. Consequently, weekly earnings reached a peak of $35.74, which was 29.2% more than the average earned per week at the beginning of the period. Since the cost of living advanced only 9.0%, there was a net gain in real weekly earnings of 18.4%. This was the highest level recorded since these data have been compiled. The average number of wage earners employed in the twenty-five manufacturing industries advanced 36.1%, or an average of about 2% per month. Employment gains and the longer work week thus raised total man hours 50.6% above the May, 1940, total, and the added effect of higher hourly earnings raised payrolls 75.8% above what they had been at the beginning of the period.

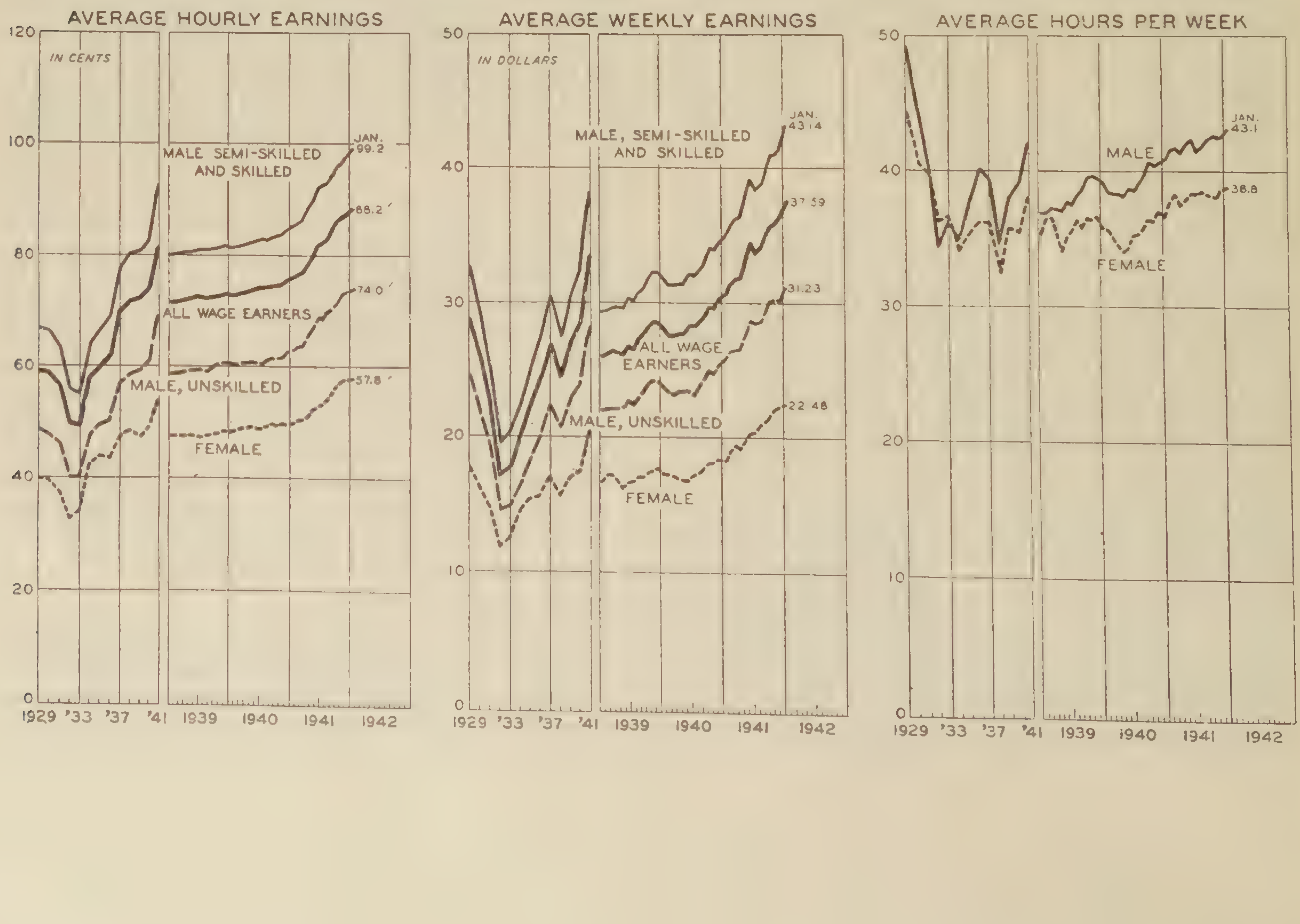
Third Period

In the period since November, 1941, the upward trends of the two previous periods have been continued except for employment. Average hourly earnings rose to $.882 in January, or 2.6%. Hours worked per week

WAGE EARNINGS IN TWENTY-FIVE MANUFACTURING INDUSTRIES

Source: THE CONFERENCE BOARD





averaged 42.4 hours in January, or 0.9 hours more than in November. The weekly pay envelopes of manufacturing workers averaged $37.59 in January, or 5.2% more than in November when they contained an average of $35.74. In the same period, real weekly earnings went up 3.4%, the 1.7% rise in the cost of living not being sufficient to offset the 5.2% advance in dollar weekly earnings. Although employment declined 0.4%, January employment was higher than in any other month, except November, since these surveys were begun. A longer average work week and higher weekly earnings more than counter-balanced the decline in employment so that 1.9% more man hours were worked in January than in November and payrolls totaled 4.8% more.

Since August, 1939

Hourly earnings for the entire war period have increased 22.5%; the work week, 4.5 hours; weekly earnings, 37.7%; and real weekly earnings, 22.4%. Since August, 1939, the number of workers has increased 50.7%; man hours worked, 68.8%; and payrolls, 107.5%.

THE SHIPBUILDING INDUSTRY

Activity in the shipbuilding industry was further accelerated in January, according to THE CONFERENCE BOARD's survey of labor statistics. Average hourly earnings of $1.111 were received in January by all male wage earners for an average of 47.3 hours of work per week. These hourly earnings represented an increase

SHIPBUILDING, JANUARY, 1942

	January, 1942	December, 1941
All Male Wage Earners		
Hourly earnings	$1.111	$1.079
Weekly earnings	$52.50	$49.94
Actual hours[1]	47.3	46.3
Nominal hours[1]	47.2	47.1
Unskilled		
Hourly earnings	$ .868	$ .828
Weekly earnings	$38.80	$36.51
Actual Hours[1]	44.7	44.1
Semi-skilled and skilled		
Hourly earnings	$1.175	$1.150
Weekly earnings	$56.40	$53.94
Actual hours	48.0	46.9

[1] Per week per wage earner

Source: THE CONFERENCE BOARD

EARNINGS, EMPLOYMENT, MAN HOURS, AND PAYROLLS, ALL WAGE EARNERS, JANUARY, 1942

Index Numbers, 1923=100

NOTE: *Hourly earnings are not wage rates because they include overtime and incentive payments*

INDUSTRY	Average Earnings						Employment		Total Man Hours Worked		Payrolls	
	Hourly, Actual		Weekly									
			Actual		Real							
	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.
Agricultural implement	171.4	169 6	143.4	134.2	151.7	144.0	142.4	144.8	119.0	114.4	204.2	194.3
Automobile[1]	199.4	187.7	173.5	136.9	183.6	146.9	90.0	102.2	78.3	74.6	156.2	139.9
Boot and shoe	127.5	127.5	111.6	107.1	118.1	114.9	101.6	99.7	89.1	83.7	113.4	106.8
Chemical	183.0	181.2	142.7	140.8	151.0	151.1	160.5	159.9	125.2	124.1	229.0	225.1
Cotton—North	138.4	137.8	119.5	118.1	126.5	126.7	50.3	50.3	43.4	43.1	60.1	59.4
Electrical manufacturing	171.7	167.8	162.8	155.3	172.3	166.6	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Furniture[2]	157.1	154.0	136.0	136.4	143.9	146.4	110.7	113.8	96.0	101.1	150.6	155.2
Hosiery and knit goods	160.2	158.6	129.5	130.7	137.0	140.2	105.6	106.5	85.3	87.6	136.8	139.2
Iron and steel[3]	166.3	167.6	113.2	111.8	119.8	120.0	132.4	131.9	89.8	87.6	149.9	147.5
Leather tanning and finishing	158.0	156.4	136.3	137.1	144.2	147.1	91.9	93.1	79.3	81.7	125.3	127.6
Lumber and millwork	177.4	177.2	147.4	146.3	156.0	157.0	71.5	72.1	59.5	59.6	105.4	105 5
Meat packing	170.0	167.7	135.9	133.1	143.8	142.8	144.6	142.1	115.8	113.0	196.5	189.1
Paint and varnish	156.9	158.2	128.1	131.7	135.6	141.3	152.8	150.6	124.5	125.1	195.7	198.3
Paper and pulp	154.4	151.8	130.2	128.0	137.8	137.3	129.5	130.1	109.0	109.5	168.6	166.5
Paper products	157.5	155.0	134.1	134.9	141.9	144.7	173.4	172.4	148.3	150.7	232.5	232.6
Printing—book and job	131.5	130.8	118.5	119.2	125.4	127.9	115.3	115.5	103.8	105.2	136.6	137.7
Printing—news and magazine	141.0	146.2	121.1	128.5	128.1	137.9	125.1	126.9	107.6	111.7	151.5	163.1
Rubber	155.3	154.6	132.3	131.3	140.0	140.9	96.8	99.3	82.6	84.2	128.1	130.4
Silk and rayon	125.2	122.4	103.7	101.0	109.7	108.4	79.7	78.8	66.0	64.9	82.6	79.6
Wool	148.9	148.3	125.1	126.7	132.4	135.9	91.7	93.9	77.0	80.1	114.7	119.0
Foundries and machine shops	164.6	160.7	159.6	153.7	168.9	164.9	184.1	179.0	178.2	170.8	293.8	275.1
1. Foundries	154.6	151.9	138.0	135.9	146.0	145.8	130.8	128.8	116.7	115.1	180.5	175.0
2. Machines and machine tools	169.9	167.2	175.6	171.5	185.8	184.0	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
3. Heavy equipment	149.4	146.7	147.6	141.8	156.2	152.1	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
4. Hardware and small parts	169.1	165.0	161.2	155.7	170.6	167.1	194 9	192.2	185.7	181.1	314.2	299.3
5. Other products	169.5	164.6	164.3	156.1	173.9	167.5	202.5	200.6	196.2	190.0	332.7	313.1
25 INDUSTRIES	163.0	160.4	141.3	135.6	149.5	145.5	126.9	126.8	109.4	107.3	178.3	171.9

NOTE: No basic 1923 data are available, hence no indexes are given for the following: rayon and allied products, rubber tires and tubes, other rubber products, woolen and worsted goods, other woolen products, cement, petroleum refining, and "27 Industries." See footnotes on page 89.

of 3% over an average rate of $1.079 in December and an average work week of 46.3 hours. Hourly earnings of unskilled workers rose on the average 4.8%, and those of semi-skilled and skilled workers, 2.2%. Their work weeks averaged 44.7 and 48.0, respectively. Weekly earnings of unskilled workers amounted to $38.80, or 6.3% more than in December; the average received by semi-skilled and skilled workers was $56.40, or only 4.6% more than the $53.94 per week earned in December.

Labor Statistics in January

Hourly earnings rose 1.6% in January; they were 16.2% above those of January, 1941, and 49.5% more than the average for the year 1929.

Weekly earnings averaged $37.59 in January, or 4.2% above those of December; they were 22.8% more than in January, 1941, and 31.7% more than in 1929.

Hours worked per week rose 1.9% between December and January. They were on the average 5.5% more than in January, 1941, and 12.2% fewer than in 1929.

"Real" weekly earnings, or dollar weekly earnings adjusted for changes in living costs, stood at 149.5 (1923 = 100). They were 2.7% more than in December, 11.8% more than in January, 1941, and 39.5% higher than the average for 1929.

Employment advanced 0.1% from December to January; it was 16.3% greater than in January, 1941, and 25.6% more than it was in 1929.

EARNINGS AND HOURS, MALE AND FEMALE WAGE EARNERS, JANUARY, 1942

Note: *Hourly earnings are not wage rates because they include overtime and incentive payments*

Industry	All Male						Female					
	Average Earnings				Average Hours per Week per Wage Earner		Average Earnings				Average Hours per Week per Wage Earner	
	Hourly		Weekly				Hourly		Weekly			
	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.
Agricultural implement	$.957	$.946	$39.59	$37.09	41.4	39.2	$.734	$.724	$29.78	$26.03	40.6	36.0
Automobile[1]	1.293	1.215	54.05	42.40	41.8	34.9	.816	.807	30.76	27.20	37.7	33.7
Boot and shoe	.732	.721	29.21	27.89	39.9	38.7	.525	.514	21.05	19.05	40.1	37.1
Chemical	.965	.957	40.02	39.35	41.5	41.1	.639	.637	25.40	25.47	39.7	40.0
Rayon and allied products	.882	.871	34.86	34.37	39.5	39.4	.646	.642	24.56	24.07	38.0	37.5
Cotton—North	.671	.670	28.47	28.12	42.5	41.9	.547	.542	21.78	21.50	39.8	39.6
Electrical manufacturing	1.035	1.012	47.64	45.43	46.1	44.9	.686	.675	28.54	27.48	41.6	40.7
Furniture[2]	.827	.811	34.73	34.79	42.0	42.9	.573	.562	21.72	22.76	37.9	40.5
Hosiery and knit goods	.775	.764	30.87	31.02	39.8	40.6	.504	.503	18.40	18.80	36.5	37.4
Iron and steel[3]	.991	.999	38.75	38.26	39.1	38.3	....	....	....	....	....	....
Leather tanning and finishing	.784	.777	32.48	32.69	41.4	42.1	.631	.623	24.61	24.56	39.0	39.4
Lumber and millwork	.839	.838	34.53	34.27	41.2	40.9	....	....	....	....	....	....
Meat packing	.837	.823	33.51	32.71	40.0	39.7	.636	.635	24.54	24.48	38.6	38.6
Paint and varnish	.854	.861	34.76	35.82	40.7	41.6	.591	.587	22.58	22.60	38.2	38.5
Paper and pulp	.799	.786	34.97	34.35	43.7	43.7	.534	.522	21.18	20.76	39.7	39.8
Paper products	.804	.791	33.59	33.84	41.8	42.8	.514	.513	19.66	20.01	38.2	39.0
Printing—book and job	.964	.959	40.10	40.28	41.6	42.0	.545	.538	22.07	22.17	40.5	41.2
Printing—news and magazine	1.033	1.073	39.84	42.44	38.6	39.6	.596	.597	23.71	23.92	39.8	40.0
Rubber	1.078	1.074	41.34	40.88	38.3	38.1	.681	.680	25.65	25.71	37.7	37.8
1. Rubber tires and tubes	1.158	1.153	42.16	41.65	36.4	36.1	.805	.807	26.72	26.14	33.2	32.4
2. Other rubber products	.946	.943	39.79	39.41	42.1	41.8	.632	.634	25.15	25.51	39.8	40.3
Silk and rayon	.675	.663	26.68	25.84	39.5	39.0	.495	.484	17.99	17.83	36.3	36.9
Wool	.807	.801	33.14	33.24	41.1	41.5	.649	.651	24.51	24.87	37.8	38.2
1. Woolen and worsted goods	.803	.792	33.62	33.08	41.9	41.8	.643	.644	25.19	25.26	39.2	39.2
2. Other woolen products[4]	.811	.810	32.65	33.40	40.3	41.2	.663	.669	23.08	24.05	34.8	36.0
Foundries and machine shops	.961	.940	46.62	44.86	48.5	47.7	.610	.595	25.24	24.66	41.4	41.5
1. Foundries	.916	.899	41.15	40.46	44.9	45.0	.688	.676	27.48	27.13	40.0	40.1
2. Machines and machine tools	.941	.925	48.56	47.34	51.6	51.2	.635	.639	27.41	27.86	43.1	43.6
3. Heavy equipment	1.001	.983	48.75	46.83	48.7	47.7	....	....	....	....	....	....
4. Hardware and small parts	.911	.891	42.83	41.37	47.0	46.4	.618	.595	26.10	24.98	42.2	42.0
5. Other products	.982	.955	47.20	44.73	48.1	46.8	.592	.580	23.89	23.62	40.3	40.7
25 INDUSTRIES	$.939	$.924	$40.55	$38.75	43.1	42.1	$.578	$.572	$22.48	$22.15	38.8	38.7
Cement	$.758	$.762	$29.62	$30.60	39.1	40.2	....	....	....	....	....	....
Petroleum refining	1.139	1.131	42.21	41.72	37.1	36.9	....	....	....	....	....	....
27 INDUSTRIES	$.941	$.926	$40.49	$38.73	43.0	42.0	....	....	....	....	....	....

See footnotes on page 89

EARNINGS AND HOURS, UNSKILLED AND SKILLED AND SEMI-SKILLED MALE WAGE EARNERS, JANUARY, 1942

NOTE: *Hourly earnings are not wage rates because they include overtime and incentive payments*

INDUSTRY	UNSKILLED						SKILLED AND SEMI-SKILLED					
	Average Earnings				Average Hours per Week per Wage Earner		Average Earnings				Average Hours per Week per Wage Earner	
	Hourly		Weekly				Hourly		Weekly			
	Jan.	Dec.	Jan.	Dec.	Jan	Dec.	Jan.	Dec.	Jan.	Dec.	Jan.	Dec.
Agricultural implement	$.793	$.787	$31.58	$29.32	39.8	37.3	$.978	$.968	$40.69	$38.17	41.6	39.5
Automobile[1]	1.109	1.070	45.80	36.70	41.3	34.3	1.318	1.235	55.22	43.23	41.9	35.0
Boot and shoe	.424	.421	17.04	16.59	40.2	39.4	.745	.734	29.73	28.41	39.9	38.7
Chemical	.835	.829	34.32	33.83	41.1	40.8	1.011	1.001	42.02	41.31	41.6	41.3
Rayon and allied products	.611	.585	23.59	22.90	38.6	39.2	.916	.908	36.35	35.85	39.7	39.5
Cotton—North	.615	.613	25.51	25.06	41.5	40.9	.693	.693	29.70	29.37	42.9	42.4
Electrical manufacturing	.805	.791	35.50	34.33	44.1	43.4	1.061	1.037	49.12	46.77	46.3	45.1
Furniture[2]	.649	.634	28.30	27.71	43.6	43.7	.872	.855	36.28	36.51	41.6	42.7
Hosiery and knit goods	.508	.507	21.87	20.81	43.0	41.0	.803	.790	31.74	32.03	39.5	40.5
Iron and steel[3]	.763	.766	28.23	28.11	37.0	36.7	1.031	1.040	40.72	40.14	39.5	38.6
Leather tanning and finishing	.610	.612	25.29	26.21	41.5	42.8	.825	.815	34.17	34.13	41.4	41.9
Lumber and millwork	.639	.636	26.19	25.89	41.0	40.7	.896	.894	37.27	36.96	41.6	41.3
Meat packing	.717	.707	27.96	28.07	39.0	39.7	.901	.886	36.49	35.17	40.5	39.7
Paint and varnish	.720	.730	29.45	30.51	40.9	41.8	.926	.931	37.60	38.64	40.6	41.5
Paper and pulp	.673	.661	28.59	27.82	42.5	42.1	.851	.837	37.79	37.25	44.4	44.5
Paper products	.634	.632	26.04	26.86	41.0	42.5	.859	.843	36.11	36.17	42.0	42.9
Printing—book and job	.575	.569	24.32	24.13	42.3	42.4	1.093	1.089	45.25	45.63	41.4	41.9
Printing—news and magazine	.645	.667	24.55	24.93	38.1	37.4	1.139	1.175	44.09	47.21	38.7	40.2
Rubber	.794	.775	30.41	29.22	38.3	37.7	1.086	1.082	41.64	41.20	38.3	38.1
1. Rubber tires and tubes	.899	.883	32.99	31.35	36.7	35.5	1.164	1.159	42.36	41.88	36.4	36.1
2. Other rubber products	.654	.650	26.69	26.70	40.8	41.1	.956	.953	40.24	39.87	42.1	41.8
Wool	.662	.661	26.85	26.96	40.6	40.8	.882	.874	36.47	36.57	41.3	41.9
1. Woolen and worsted goods	.676	.669	27.55	27.24	40.8	40.7	.874	.861	37.14	36.48	42.5	42.4
2. Other woolen products[4]	.645	.651	26.04	26.65	40.4	40.9	.890	.886	35.81	36.66	40.2	41.4
Foundries and machine shops	.789	.772	36.48	35.30	46.2	45.7	.996	.972	48.83	46.82	49.0	48.2
1. Foundries	.748	.741	33.24	33.07	44.5	44.6	.990	.968	44.65	43.69	45.1	45.1
2. Machines and machine tools	.771	.755	38.79	38.30	50.3	50.7	.975	.953	51.05	49.33	52.3	51.8
3. Heavy equipment	.812	.789	37.46	36.06	46.1	45.7	1.035	1.018	50.92	48.87	49.2	48.0
4. Hardware and small parts	.738	.720	34.84	33.11	47.2	46.0	.933	.909	44.16	42.59	47.3	46.8
5. Other products	.842	.822	37.59	35.60	44.6	43.3	1.002	.973	48.68	46.13	48.6	47.4
24 INDUSTRIES[5]	$.740	$.730	$31.23	$30.10	42.2	41.4	$.992	$.974	$43.14	$41.10	43.5	42.4
Cement	$.663	$.660	$24.88	$24.60	37.5	37.3	$.772	$.777	$30.34	$31.56	39.3	40.6
Petroleum refining	.802	.812	29.59	29.64	36.9	36.5	1.198	1.187	44.45	43.92	37.1	37.0
26 INDUSTRIES[5]	$.740	$.730	$31.15	$30.05	42.1	41.3	$.994	$.977	$43.06	$41.07	43.3	42.3

NOTE: The wage data here given are for cash payments only and do not take into consideration the value of such wage equivalents as reduced or free house rents or other special services rendered by the company to employees. Various forms of wage equivalents are in use in industrial establishments in many localities, but the part which they play as compensation for work performed cannot be taken into account in a study of this character.

[1] Based on data collected by the Automobile Manufacturers Association and THE CONFERENCE BOARD. [2] Includes wood, metal, and upholstered household and office furniture.

[3] Based on data collected by the American Iron and Steel Institute and THE CONFERENCE BOARD. [4] Principally rugs.

[5] Silk and rayon industry not included, as adequate data for unskilled and skilled groups are not available for this industry. *r* Revised

n.a. Not available for publication; included in total indexes.

Man hours worked in January totaled 2% more than in December, 22.8% more than in January, 1941, and 10.3% more than in 1929.

Payrolls increased 4.3% over their December total. They exceeded those of January, 1941, by 42.9%, and those of 1929 by 65.4%.

Outlook for Workers Bright

In summation, the outlook of manufacturing workers was exceedingly bright in January. For working 42.4 hours at $.882 per hour, they received $37.59 per week, the highest recorded average since these surveys were begun. Although general living costs rose 1.4% between December and January, dollar earnings also advanced 4.2%, and, as a result, the real weekly earnings of manufacturing workers were greater than ever before. More workers were employed, payrolls were at a new high, and total man hours worked exceeded those of any other month since July, 1920.

E. B. DUNN
Division of Industrial Economics

Cost of Living, United States and 68 Cities, February

LIVING COSTS for families of wage earners and lower-salaried clerical workers in the United States rose 0.7% between January and February, as compared with a rise of 1.4% between December and January. THE CONFERENCE BOARD'S index for February was 95.2% of the 1923 level. Clothing prices advanced the most over the period, 2.5%, and food prices next, 0.6%. Other major items of the budget showed only slight rises. Since February, 1941, prices have advanced 10.6% for the country as a whole. The purchasing value of the 1923 dollar declined to 105.0 cents in February, while in January it was 105.8 cents; a year ago it was 116.1 cents.

In 61 of the 68 cities for which THE CONFERENCE BOARD regularly constructs indexes, living costs advanced over the month. In three cities, Meadville, Pennsylvania, Muskegon, Michigan, and Spokane, Washington, no changes occurred. In three others declines were registered as follows: Sacramento –0.2%; San Francisco –0.5%; and Des Moines –0.6%. The greatest increase between the two months took place in New Orleans, 1.7%. Since a year ago, rises have occurred in all cities for which comparable data are available.

H. S. HILL
Division of Industrial Economics

CHANGES IN THE COST OF LIVING, FEBRUARY, 1942

Item	Relative Importance in Family Budget	Index Numbers, 1923=100			Percentage Changes	
		February, 1942	January, 1942	February, 1941	January, 1942 to February, 1942	February, 1941 to February, 1942
Food[1]	33	95.8	95.2	78.8	+0.6	+21.6
Housing	20	90.4	90.1	87.7	+0.3	+3.1
Clothing	12	84.5	82.4	73.1	+2.5	+15.6
Men's	..	.. 93.6	.. 91.4	.. 80.4	.. +2.4	.. +16.4
Women's	..	.. 75.3	.. 73.4	.. 65.7	.. +2.6	.. +14.6
Fuel and light	5	90.4	90.3r	86.4	+0.1	+4.6
Coal	..	.. 92.7	.. 92.6	.. 86.7	.. +0.1	.. +6.9
Gas and electricity[2]	..	.. 85.7	.. 85.7r	.. 85.9	.. 0	.. –0.2
Sundries	30	102.9	102.5	98.2	+0.4	+4.8
Weighted average of all items	100	95.2	94.5	86.1	+0.7	+10.6
Purchasing value of dollar	..	105.0	105.8	116.1	–0.8	–9.6

[1] Based on THE CONFERENCE BOARD index of food prices, January 15, 1942 and February 13, 1942 and on food price indexes of the United States Bureau of Labor Statistics, February 18, 1941.

[2] Based upon retail prices of 35 kilowatt hours of electricity, 1,000 cubic feet of natural gas, or 2,000 cubic feet of manufactured gas.

rRevised.

COST OF LIVING OF WAGE EARNERS IN THE UNITED STATES, AND PURCHASING VALUE OF THE DOLLAR

Date	Weighted Average of All Items	Food	Housing	Clothing			Fuel and Light			Sundries	Purchasing Value of Dollar
				Total	Men's	Women's	Total	Coal	Gas and Electricity		
1941 February	86.1	78.8	87.7	73.1	80.4	65.7	86.4	86.7	85.9	98.2	116.1
March	86.3	79.2	87.7	73.2	80.6	65.8	86.4	86.7	85.9	98.3	115.9
April	86.9	81.0	87.8	73.3	80.8	65.8	86.4	86.7	85.9	98.3	115.1
May	87.4	82.2	88.0	73.6	81.1	66.0	86.4	86.6	85.9	98.5	114.4
June	88.5	85.5	88.2	73.6	81.2	66.0	86.7	87.1	85.9	98.6	113.0
July	88.9	86.2	88.4	73.8	81.4	66.1	87.8	88.7	85.9	98.7	112.5
August	89.4	87.3	88.6	74.5	82.0	66.9	88.6	90.0	85.9	98.8	111.9
September	90.8	89.4	88.9	76.9	84.8	69.0	89.4	91.1	85.9	99.8	110.1
October	92.0	90.7	89.2	78.3	86.2	70.4	90.0	92.0	85.9	101.5	108.7
November	92.9	92.2	89.5	79.6	87.3	71.9	90.2	92.4	85.9	101.9	107.6
December	93.2	92.6	89.9	80.1	87.8	72.3	90.3	92.5	85.9	102.2	107.3
1942 January	94.5	95.2	90.1	82.4	91.4	73.4	90.3r	92.6	85.7r	102.5	105.8
February	95.2	95.8	90.4	84.5	93.6	75.3	90.4	92.7	85.7	102.9	105.0

rRevised

COST OF LIVING OF WAGE EARNERS AND LOWER-SALARIED CLERICAL WORKERS IN 60 CITIES DURING JANUARY AND FEBRUARY, 1942

Source: THE CONFERENCE BOARD

Index Numbers, January, 1939 = 100

City	Index Numbers Jan., 1939 = 100			Percentage Changes	
	Feb. 1942	Jan. 1942	Feb. 1941	Jan. 1942 to Feb. 1942	Feb. 1941 to Feb. 1942
Akron					
Food	123.1	122.2	102.4	+0.7	+20.2
Housing	121.1	121.1	114.7	0	+5.6
Clothing	117.5	116.3	98.8	+1.0	+18.9
Fuel and light	114.1	114.1	108.1	0	+5.6
Housefurnishings	115.5	115.5	99.5	0	+16.1
Sundries	104.7	104.5	100.5	+0.2	+4.2
Weighted Total	116.0	115.6	104.0	+0.3	+11.5
Atlanta					
Food	123.6	122.8	99.1	+0.7	+24.7
Housing	99.2	99.2	97.0	0	+2.3
Clothing	114.2	112.0	98.7	+2.0	+15.7
Fuel and light	111.8	111.8	97.8	0	+14.3
Housefurnishings	115.4	114.8	100.0	+0.5	+15.4
Sundries	104.6	104.6	100.9	0	+3.7
Weighted Total	111.6	111.1	99.4	+0.5	+12.3
Baltimore					
Food	131.9	130.7	104.4	+0.9	+26.3
Housing	107.2	107.2	101.7	0	+5.4
Clothing	112.9	110.8	99.4	+1.9	+13.6
Fuel and light	106.0	106.0	98.5	0	+7.6
Housefurnishings	127.0	127.0	103.9	0	+22.2
Sundries	101.6	101.5*r*	100.6	+0.1	+1.0
Weighted Total	115.7	115.1	102.0	+0.5	+13.4
Birmingham					
Food	128.6	127.1	105.1	+1.2	+22.4
Housing	106.9	106.9	103.5	0	+3.3
Clothing	118.7	116.5	100.2	+1.9	+18.5
Fuel and light	106.8	106.8	92.7	0	+15.2
Housefurnishings	115.8	115.3	100.4	+0.4	+15.3
Sundries	100.6	100.5	100.1	+0.1	+0.5
Weighted Total	113.0	112.2	101.8	+0.7	+11.0
Boston					
Food	124.2	122.0	98.8	+1.8	+25.7
Housing	103.5	103.2	102.9	+0.3	+0.6
Clothing	118.7	115.6	99.2	+2.7	+19.7
Fuel and light	107.9	107.9	103.5	0	+4.3
Housefurnishings	123.9	123.3	104.0	+0.5	+19.1
Sundries	103.6	103.6	101.8	0	+1.8
Weighted Total	113.5	112.3	100.9	+1.1	+12.5
Bridgeport					
Food	125.0	124.1	103.4	+0.7	+20.9
Housing	110.1	110.1	104.5	0	+5.4
Clothing	116.7	114.7	101.4	+1.7	+15.1
Fuel and light	106.4	106.4	102.1	0	+4.2
Housefurnishings	123.1	119.9	102.1	+2.7	+20.6
Sundries	103.8	103.7	101.0	+0.1	+2.8
Weighted Total	114.6	113.9	102.6	+0.6	+11.7
Buffalo					
Food	123.1	123.0	106.4	+0.1	+15.7
Housing	111.7	111.7	105.1	0	+6.3
Clothing	111.6	111.1	98.9	+0.5	+12.8
Fuel and light	103.1	103.1	99.4	0	+3.7
Housefurnishings	122.0	121.1	100.2	+0.7	+21.8
Sundries	103.3	103.2	101.9	+0.1	+1.4
Weighted Total	112.9	112.7	103.3	+0.2	+9.3
Chattanooga					
Food	131.1	131.2	102.3	–0.1	+28.2
Housing	103.4	103.4	100.2	0	+3.2
Clothing	114.1	109.9	99.2	+3.8	+15.0
Fuel and light	104.7	104.7	97.5	0	+7.4
Housefurnishings	118.7	118.5	99.9	+0.2	+18.8
Sundries	100.3	100.3	97.6	0	+2.8
Weighted Total	112.6	112.1	99.7	+0.4	+12.9
Chicago					
Food	119.7	119.9	103.7	–0.2	+15.4
Housing	102.9	102.9	98.7	0	+4.3
Clothing	117.6	113.9	100.2	+3.2	+17.4
Fuel and light	100.2	100.2	94.3	0	+6.3
Housefurnishings	120.3	119.4	101.1	+0.8	+19.0
Sundries	101.5	101.4	100.1	+0.1	+1.4
Weighted Total	109.8	109.4	100.7	+0.4	+9.0
Cincinnati					
Food	118.9	117.3	102.9	+1.4	+15.5
Housing	101.2	100.8	99.8	+0.4	+1.4
Clothing	114.2	111.8	98.2	+2.1	+16.3
Fuel and light	106.0	106.0	101.1	0	+4.8
Housefurnishings	119.6	116.5	101.6	+2.7	+17.7
Sundries	103.9	103.7	102.2	+0.2	+1.7
Weighted Total	110.6	109.4	101.5	+1.1	+9.0
Cleveland					
Food	120.1	119.8	100.8	+0.3	+19.1
Housing	105.4	105.4	102.4	0	+2.9
Clothing	120.1	118.4	100.3	+1.4	+19.7
Fuel and light	106.1	106.1	102.0	0	+4.0
Housefurnishings	117.1	116.6	101.3	+0.4	+15.6
Sundries	102.0	101.9	101.2	+0.1	+0.8
Weighted Total	111.1	110.8	101.3	+0.3	+9.7
Dallas					
Food	135.4	132.0	99.4	+2.6	+36.2
Housing	101.6	101.6	97.9	0	+3.8
Clothing	117.5	114.9	99.7	+2.3	+17.9
Fuel and light	100.0	100.0	100.0	0	0
Housefurnishings	123.0	122.9	102.5	+0.1	+20.0
Sundries	101.9	101.8	100.7	+0.1	+1.2
Weighted Total	114.7	113.4	99.8	+1.1	+14.9
Dayton					
Food	116.8	116.4	95.2	+0.3	+22.7
Housing	*a*	*a*	*a*	*a*	*a*
Clothing	114.0	112.6	98.9	+1.2	+15.3
Fuel and light	105.2	105.2	102.9	0	+2.2
Housefurnishings	125.7	124.2	106.8	+1.2	+17.7
Sundries	102.2	102.2	101.6	0	+0.6
Weighted Total	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Denver					
Food	120.5	121.4	100.9	–0.7	+19.4
Housing	104.0	104.4	99.6	–0.4	+4.4
Clothing	115.8	113.1	99.8	+2.4	+16.0
Fuel and light	103.4	102.9	101.2	+0.5	+2.2
Housefurnishings	116.7	113.3	99.8	+3.0	+16.9
Sundries	102.1	102.0	100.7	+0.1	+1.4
Weighted Total	110.2	110.1	100.5	+0.1	+9.7

Footnotes given on page 95

COST OF LIVING OF WAGE EARNERS AND LOWER-SALARIED CLERICAL WORKERS IN 60 CITIES DURING JANUARY AND FEBRUARY, 1942—Continued

Source: The Conference Board

Index Numbers, January, 1939=100

City	Index Numbers Jan., 1939=100			Percentage Changes	
	Feb. 1942	Jan. 1942	Feb. 1941	Jan. 1942 to Feb. 1942	Feb. 1941 to Feb. 1942
Des Moines					
Food	134.7	138.2	110.1	–2.5	+22.3
Housing	103.5	103.5	100.1	0	+3.4
Clothing	120.2	117.5	103.6	+2.3	+16.0
Fuel and light	117.6	117.6	101.9	0	+15.4
Housefurnishings	116.5	114.5	98.5	+1.7	+18.3
Sundries	100.9	100.9	99.9	0	+1.0
Weighted Total	116.0	116.7	103.6	–0.6	+12.0
Detroit					
Food	118.8	117.1	101.4	+1.5	+17.2
Housing	107.2	107.2	101.9*r*	0	+5.2
Clothing	113.8	109.7	98.2	+3.7	+15.9
Fuel and light	109.6	109.6	102.3	0	+7.1
Housefurnishings	128.3	125.3	107.2	+2.4	+19.7
Sundries	100.7	100.6	99.7	+0.1	+1.0
Weighted Total	110.7	109.6	101.0	+1.0	+9.6
Duluth					
Food	124.3	124.4	104.2	–0.1	+19.3
Housing	100.1	100.1	100.0	0	+0.1
Clothing	116.5	114.8	99.1	+1.5	+17.6
Fuel and light	100.7	100.7	98.6*r*	0	+2.1
Housefurnishings	124.4	123.5	101.4	+0.7	+22.7
Sundries	102.1	102.0	100.8	+0.1	+1.3
Weighted Total	111.0	110.8	101.3*r*	+0.2	+9.6
Erie, Pa.					
Food	122.0	120.8	101.7	+1.0	+20.0
Housing	106.7	105.5	101.8	+1.1	+4.8
Clothing	123.3	119.5	101.7	+3.2	+21.2
Fuel and light	108.4	107.0	101.5	+1.3	+6.8
Housefurnishings	128.5	126.2	107.2	+1.8	+19.9
Sundries	106.6	106.5	101.6	+0.1	+4.9
Weighted Total	115.4	114.0	101.9	+1.2	+13.2
Fall River					
Food	130.9	128.4	103.4	+1.9	+26.6
Housing	101.9	101.9	101.9	0	0
Clothing	114.2	110.4	99.5	+3.4	+14.8
Fuel and light	102.6	102.6	97.9	0	+4.8
Housefurnishings	112.9	112.9	103.0	0	+9.6
Sundries	104.9	104.8	102.9	+0.1	+1.9
Weighted Total	114.6	113.3	102.2	+1.1	+12.1
Front Royal, Va.					
Food	136.7	137.0	*n.a.*	–0.2	*n.a.*
Housing	93.7	93.7	*n.a.*	0	*n.a.*
Clothing	122.4	119.8	*n.a.*	+2.2	*n.a.*
Fuel and light	103.5	103.5	*n.a.*	0	*n.a.*
Housefurnishings	125.0	124.4	*n.a.*	+0.5	*n.a.*
Sundries	102.4	101.8	*n.a.*	+0.6	*n.a.*
Weighted Total	112.4	112.0	*n.a.*	+0.4	*n.a.*
Grand Rapids					
Food	135.4	134.2	103.2	+0.9	+31.2
Housing	106.6	106.6	105.3	0	+1.2
Clothing	113.3	111.5	99.0	+1.6	+14.4
Fuel and light	108.0	108.0	99.6	0	+8.4
Housefurnishings	127.9	127.6	100.1	+0.2	+27.8
Sundries	103.6	103.5	100.7	+0.1	+2.9
Weighted Total	116.1	115.5	101.9	+0.5	+13.9
Houston					
Food	126.1	125.6	103.6	+0.4	+21.7
Housing	105.6	104.2	101.4	+1.3	+4.1
Clothing	118.5	115.3	100.9	+2.8	+17.4
Fuel and light	92.3	92.3	92.9*r*	0	–0.6
Housefurnishings	120.9	119.8	101.8	+0.9	+18.8
Sundries	104.1	104.1	101.7	0	+2.4
Weighted Total	112.5	111.7	101.7*r*	+0.7	+10.6
Indianapolis					
Food	129.4	127.1	104.5	+1.8	+23.8
Housing	108.3	108.2	104.6	+0.1	+3.5
Clothing	114.9	113.2	100.2	+1.5	+14.7
Fuel and light	104.4	104.4	100.2	0	+4.2
Housefurnishings	110.1	109.8	100.5	+0.3	+9.6
Sundries	104.6	104.6	103.0	0	+1.6
Weighted Total	113.7	112.8	103.0	+0.8	+10.4
Kansas City, Mo.					
Food	113.5	113.1	94.8	+0.4	+19.7
Housing	101.7	101.4	100.4	+0.3	+1.3
Clothing	115.6	114.2	98.7	+1.2	+17.1
Fuel and light	110.0	110.0	105.8	0	+4.0
Housefurnishings	118.8	116.5	100.7	+2.0	+18.0
Sundries	100.8	100.8	100.6	0	+0.2
Weighted Total	107.8	107.3	99.1	+0.5	+8.8
Lansing					
Food	137.5	137.8	111.1	–0.2	+23.8
Housing	98.0	98.0	96.2*r*	0	+1.9
Clothing	117.4	114.5	96.1	+2.5	+22.2
Fuel and light	101.6	101.6	94.8	0	+7.2
Housefurnishings	128.7	125.6	107.4	+2.5	+19.8
Sundries	103.8	103.8	100.9	0	+2.9
Weighted Total	114.7	114.3	102.1*r*	+0.3	+12.3
Los Angeles					
Food	125.8	126.1	101.9	–0.2	+23.5
Housing	105.2	105.2	99.8	0	+5.4
Clothing	111.1	109.9	98.4	+1.1	+12.9
Fuel and light	96.2	96.2	96.2*r*	0	0
Housefurnishings	122.8	121.3	104.0	+1.2	+18.1
Sundries	103.2	102.7	101.5	+0.5	+1.7
Weighted Total	111.8	111.5	100.9	+0.3	+10.8
Louisville					
Food	120.1	118.2	100.8	+1.6	+19.1
Housing	104.9	104.9	102.9	0	+1.9
Clothing	117.8	115.9	99.2	+1.6	+18.8
Fuel and light	115.4	115.4	109.7	0	+5.2
Housefurnishings	124.5	122.8	105.5	+1.4	+18.0
Sundries	101.9	101.8	100.1	+0.1	+1.8
Weighted Total	112.4	111.4	101.7	+0.9	+10.5
Lynn					
Food	129.2	127.9	105.1	+1.0	+22.9
Housing	103.0	103.0	100.4	0	+2.6
Clothing	118.2	115.7	100.5	+2.2	+17.6
Fuel and light	110.8	110.8	105.9	0	+4.6
Housefurnishings	122.4	122.4	102.3	0	+19.6
Sundries	104.6	104.5	102.5	+0.1	+2.0
Weighted Total	116.3	115.5	103.2	+0.7	+12.7

Footnotes given on page 95

COST OF LIVING OF WAGE EARNERS AND LOWER-SALARIED CLERICAL WORKERS IN 60 CITIES DURING JANUARY AND FEBRUARY, 1942—Continued

Source: THE CONFERENCE BOARD

Index Numbers, January, 1939=100

City	Index Numbers Jan., 1939=100			Percentage Changes	
	Feb. 1942	Jan. 1942	Feb. 1941	Jan. 1942 to Feb. 1942	Feb. 1941 to Feb. 1942
Macon					
Food	131.4	129.0	103.5	+1.9	+27.0
Housing	121.7	121.7	115.3	0	+5.6
Clothing	114.2	109.1	98.6	+4.7	+15.8
Fuel and light	107.8	107.8	101.0	0	+6.7
Housefurnishings	127.2	127.2	108.0	0	+17.8
Sundries	101.2	101.0	98.8	+0.2	+2.4
Weighted Total	116.3	114.9	102.9	+1.2	+13.0
Manchester, N. H.					
Food	125.0	121.6	100.8	+2.8	+24.0
Housing	103.0	102.8	101.2	+0.2	+1.8
Clothing	115.0*p*	110.7	100.5	+3.9	+14.4
Fuel and light	103.4	103.4	97.7	0	+5.8
Housefurnishings	120.5	120.5	100.9	0	+19.4
Sundries	103.4	103.3	102.5	+0.1	+0.9
Weighted Total	113.4	111.6	101.0	+1.6	+12.3
Meadville, Pa.					
Food	126.4	128.0	*n.a.*	–1.3	*n.a.*
Housing	104.6	104.6	*n.a.*	0	*n.a.*
Clothing	116.2*p*	113.5	*n.a.*	+2.4	*n.a.*
Fuel and light	105.4	105.4	*n.a.*	0	*n.a.*
Housefurnishings	121.9	118.1	*n.a.*	+3.2	*n.a.*
Sundries	102.6	102.2	*n.a.*	+0.4	*n.a.*
Weighted Total	112.6	112.6	*n.a.*	0	*n.a.*
Memphis					
Food	128.3	126.8	101.3	+1.2	+26.7
Housing	108.0	107.4	103.1	+0.6	+4.8
Clothing	116.0	113.7	99.0	+2.0	+17.2
Fuel and light	103.1	103.1	98.1	0	+5.1
Housefurnishings	126.8	126.3	100.0	+0.4	+26.8
Sundries	103.1	103.0	102.0	+0.1	+1.1
Weighted Total	114.0	113.1	101.3	+0.8	+12.5
Milwaukee					
Food	119.4	120.7	99.6	–1.1	+19.9
Housing	102.4	102.3	100.4	+0.1	+2.0
Clothing	115.4	113.2	99.8	+1.9	+15.6
Fuel and light	103.3	103.3	98.2*r*	0	+5.2
Housefurnishings	122.4	118.7	102.6	+3.1	+19.3
Sundries	102.8	102.8	100.9	0	+1.9
Weighted Total	110.1	110.0	100.2	+0.1	+9.9
Minneapolis					
Food	127.2	123.5	104.2	+3.0	+22.1
Housing	103.2	103.2	100.8	0	+2.4
Clothing	118.1	117.0	101.4	+0.9	+16.5
Fuel and light	99.6	99.6	98.2	0	+1.4
Housefurnishings	119.3	117.8	103.6	+1.3	+15.2
Sundries	105.4	105.3	102.6	+0.1	+2.7
Weighted Total	113.0	111.6	102.3	+1.3	+10.5
Muskegon					
Food	129.8	130.8	110.1	–0.8	+17.9
Housing	115.4	115.4	106.4	0	+8.5
Clothing	113.4	111.1	97.2	+2.1	+16.7
Fuel and light	106.2	106.2	100.3	0	+5.9
Housefurnishings	115.3	115.0	101.7	+0.3	+13.4
Sundries	105.2	105.0	100.5	+0.2	+4.7
Weighted Total	115.6	115.6	104.0	0	+11.2

City	Index Numbers Jan., 1939=100			Percentage Changes	
	Feb. 1942	Jan. 1942	Feb. 1941	Jan. 1942 to Feb. 1942	Feb. 1941 to Feb. 1942
Newark					
Food	116.0	114.5	105.6	+1.3	+9.8
Housing	101.4	101.4	99.0	0	+2.4
Clothing	116.4	112.5	98.8	+3.5	+17.8
Fuel and light	102.2	102.2	96.3	0	+6.1
Housefurnishings	125.4	122.9	101.8	+2.0	+23.2
Sundries	102.7	102.6	100.6	+0.1	+2.1
Weighted Total	109.1	108.1	101.6	+0.9	+7.4
New Haven					
Food	126.8	125.8	103.4	+0.8	+22.6
Housing	105.6	105.6	102.9	0	+2.6
Clothing	116.8	113.9	101.2	+2.5	+15.4
Fuel and light	105.9	105.9	102.0	0	+3.8
Housefurnishings	121.8	118.6	101.0	+2.7	+20.6
Sundries	102.5	102.4	101.8	+0.1	+0.7
Weighted Total	114.0	113.2	102.5	+0.7	+11.2
New Orleans					
Food	132.6	127.9	105.0	+3.7	+26.3
Housing	108.1	108.1	107.3	0	+0.7
Clothing	115.1	113.1	98.9	+1.8	+16.4
Fuel and light	103.2	103.2	98.3	0	+5.0
Housefurnishings	126.5	125.8	105.8	+0.6	+19.6
Sundries	102.6	102.5	99.9	+0.1	+2.7
Weighted Total	117.0	115.0	103.3	+1.7	+13.3
New York					
Food	125.1	123.2	104.0	+1.5	+20.3
Housing	101.0	101.0	100.1	0	+0.9
Clothing	109.5	106.5	97.8	+2.8	+12.0
Fuel and light	107.0	107.0	101.5*r*	0	+5.4
Housefurnishings	124.3	121.6	103.3	+2.2	+20.3
Sundries	103.7	103.7	102.7	0	+1.0
Weighted Total	112.2	111.1	102.0	+1.0	+10.0
Oakland					
Food	127.6	126.6	101.9	+0.8	+25.2
Housing	122.3	122.3	103.3	0	+18.4
Clothing	116.1	114.2	97.6	+1.7	+19.0
Fuel and light	84.9	84.9	84.9	0	0
Housefurnishings	114.9	113.3	101.2	+1.4	+13.5
Sundries	99.9	99.9	96.9	0	+3.1
Weighted Total	114.4	113.8	99.4	+0.5	+15.1
Omaha					
Food	131.6	129.8	106.1	+1.4	+24.0
Housing	100.2	100.0	98.5	+0.2	+1.7
Clothing	114.8	111.9	99.1	+2.6	+15.8
Fuel and light	103.6	103.6	98.7	0	+5.0
Housefurnishings	129.9	128.2	108.4	+1.3	+19.8
Sundries	103.4	103.3	100.9	+0.1	+2.5
Weighted Total	113.8	112.8	102.1	+0.9	+11.5
Parkersburg, W.Va.					
Food	130.7	129.4	*n.a.*	+1.0	*n.a.*
Housing	103.5	103.5	*n.a.*	0	*n.a.*
Clothing	119.6	115.8	*n.a.*	+3.3	*n.a.*
Fuel and light	94.4	94.4	*n.a.*	0	*n.a.*
Housefurnishings	123.4	122.7	*n.a.*	+0.6	*n.a.*
Sundries	104.2	103.0	*n.a.*	+1.2	*n.a.*
Weighted Total	115.6	114.3	*n.a.*	+1.1	*n.a.*

Footnotes given on page 95

COST OF LIVING OF WAGE EARNERS AND LOWER-SALARIED CLERICAL WORKERS IN 60 CITIES DURING JANUARY AND FEBRUARY, 1942—Continued

Source: THE CONFERENCE BOARD

Index Numbers, January, 1939=100

City	Index Numbers Jan., 1939=100			Percentage Changes	
	Feb. 1942	Jan. 1942	Feb. 1941	Jan. 1942 to Feb. 1942	Feb. 1941 to Feb. 1942
Philadelphia					
Food	129.7	130.7	101.4	-0.8	+27.9
Housing	102.5	102.5	99.7	0	+2.8
Clothing	119.2	115.3	101.0	+3.4	+18.0
Fuel and light	107.0	107.0	100.8	0	+6.2
Housefurnishings	116.8	115.5	98.9	+1.1	+18.1
Sundries	102.4	102.1	101.2	+0.3	+1.2
Weighted Total	115.0	114.7	100.9	+0.3	+14.0
Pittsburgh					
Food	123.9	123.4	101.8	+0.4	+21.7
Housing	105.2	103.4	101.7	+1.7	+3.4
Clothing	117.3	115.2	99.9	+1.8	+17.4
Fuel and light	113.7	113.7	106.5	0	+6.8
Housefurnishings	114.8	114.6	101.6	+0.2	+13.0
Sundries	104.4	104.3	101.7	+0.1	+2.7
Weighted Total	113.4	112.6	101.8	+0.7	+11.4
Portland, Ore.					
Food	125.1	124.6	101.6	+0.4	+23.1
Housing	108.8	105.7	101.1	+2.9	+7.6
Clothing	121.5	117.8	102.2	+3.1	+18.9
Fuel and light	98.8	98.8	98.8	0	0
Housefurnishings	111.7	108.0	100.9	+3.4	+10.7
Sundries	104.1	103.9	102.3	+0.2	+1.8
Weighted Total	113.3	112.1	101.6	+1.1	+11.5
Providence					
Food	130.9	130.4	104.7	+0.4	+25.0
Housing	102.6	102.6	100.5	0	+2.1
Clothing	113.1	109.3	98.5	+3.5	+14.8
Fuel and light	100.7	100.7	98.9	0	+1.8
Housefurnishings	123.0	122.4	103.4	+0.5	+19.0
Sundries	101.1	100.8	100.7	+0.3	+0.4
Weighted Total	112.4	111.8	101.6	+0.5	+10.6
Richmond					
Food	127.3	126.5	103.0	+0.6	+23.6
Housing	102.2	102.2	100.4	0	+1.8
Clothing	116.0	110.6	99.6	+4.9	+16.5
Fuel and light	103.9	103.9	98.6	0	+5.4
Housefurnishings	118.9	117.3	99.5	+1.4	+19.5
Sundries	102.4	102.2	100.2	+0.2	+2.2
Weighted Total	111.9	111.0	100.9	+0.8	+10.9
Roanoke, Va.					
Food	130.6	129.4	*n.a.*	+0.9	*n.a.*
Housing	122.7	122.7	*n.a.*	0	*n.a.*
Clothing	111.0	109.3	*n.a.*	+1.6	*n.a.*
Fuel and light	98.9	98.9	*n.a.*	0	*n.a.*
Housefurnishings	122.9	121.6	*n.a.*	+1.1	*n.a.*
Sundries	104.3	104.1	*n.a.*	+0.2	*n.a.*
Weighted Total	116.4	115.7	*n.a.*	+0.6	*n.a.*
Rochester					
Food	124.1	124.3	105.5	-0.2	+17.6
Housing	103.8	103.8	101.5	0	+2.3
Clothing	119.3	116.3	101.2	+2.6	+17.9
Fuel and light	108.8	108.8	104.9	0	+3.7
Housefurnishings	131.7	131.7	105.1	0	+25.3
Sundries	104.9	104.9	103.0	0	+1.8
Weighted Total	113.2	113.0	103.5	+0.2	+9.4

City	Index Numbers Jan., 1939=100			Percentage Changes	
	Feb. 1942	Jan. 1942	Feb. 1941	Jan. 1942 to Feb. 1942	Feb. 1941 to Feb. 1942
Sacramento					
Food	124.8	127.2	103.2	-1.9	+20.9
Housing	106.2	106.2	102.4	0	+3.7
Clothing	117.4	113.3	99.7	+3.6	+17.8
Fuel and light	83.9	83.9	83.9	0	0
Housefurnishings	124.2	121.4	99.4	+2.3	+24.9
Sundries	103.1	103.2	101.4	-0.1	+1.7
Weighted Total	111.7	111.9	101.0	-0.2	+10.6
St. Louis					
Food	127.4	126.2	104.5	+1.0	+21.9
Housing	105.3	103.9	100.0	+1.3	+5.3
Clothing	116.8	114.3*r*	101.0	+2.2	+15.6
Fuel and light	118.4	118.4	110.2	0	+7.4
Housefurnishings	116.7	116.6*r*	101.2	+0.1	+15.3
Sundries	101.6	101.6	102.1	0	-0.5
Weighted Total	114.0	113.2	103.0	+0.7	+10.7
St. Paul					
Food	123.7	124.3	105.7	-0.5	+17.0
Housing	100.7	100.7	100.7	0	0
Clothing	115.3	113.3	101.4	+1.8	+13.7
Fuel and light	99.3	99.3	99.7	0	-0.4
Housefurnishings	120.8	119.1	105.9	+1.4	+14.1
Sundries	106.2	106.1	102.6	+0.1	+3.5
Weighted Total	111.5	111.4	103.0	+0.1	+8.3
San Francisco					
Food	128.9	132.2	103.9	-2.5	+24.1
Housing	97.6	97.8	97.8	-0.2	-0.2
Clothing	113.4	111.6*r*	99.1	+1.6	+14.4
Fuel and light	84.9	84.9	84.9	0	0
Housefurnishings	117.1	115.9	100.7	+1.0	+16.3
Sundries	101.2	100.6	99.3	+0.6	+1.9
Weighted Total	110.9	111.5	100.0	-0.5	+10.9
Seattle					
Food	132.0	132.8	104.7	-0.6	+26.1
Housing	113.5	111.3	106.0	+2.0	+7.1
Clothing	112.8	110.2	99.0	+2.4	+13.9
Fuel and light	108.0	107.5	95.3	+0.5	+13.3
Housefurnishings	115.6	113.4	101.1	+1.9	+14.3
Sundries	105.5	105.5	103.6	0	+1.8
Weighted Total	116.4	116.0	103.2	+0.3	+12.8
Spokane					
Food	117.9	118.5	100.7	-0.5	+17.1
Housing	100.3	99.9	99.6	+0.4	+0.7
Clothing	114.4	114.1	97.9	+0.3	+16.9
Fuel and light	98.9	98.9	98.2*r*	0	+0.7
Housefurnishings	126.3	125.0	103.0	+1.0	+22.6
Sundries	106.3	106.2	104.7	+0.1	+1.5
Weighted Total	110.1	110.1	101.5*r*	0	+8.5
Syracuse					
Food	136.8	136.3	106.3	+0.4	+28.7
Housing	109.1	109.1	98.7	0	+10.5
Clothing	119.7	118.3	98.0	+1.2	+22.1
Fuel and light	103.7	103.7*r*	98.3	0	+5.5
Housefurnishings	140.7	139.3	108.1	+1.0	+30.2
Sundries	106.1	105.9*r*	101.7	+0.2	+4.3
Weighted Total	118.5	118.2	102.0	+0.3	+16.2

Footnotes given on page 95

COST OF LIVING OF WAGE EARNERS AND LOWER-SALARIED CLERICAL WORKERS IN 60 CITIES DURING JANUARY AND FEBRUARY, 1942—Continued

Source: THE CONFERENCE BOARD

Index Numbers, January, 1939=100

CITY	Index Numbers Jan., 1939=100			Percentage Changes		CITY	Index Numbers Jan., 1939=100			Percentage Changes	
	Feb. 1942	Jan. 1942	Feb. 1941	Jan. 1942 to Feb. 1942	Feb. 1941 to Feb. 1942		Feb. 1942	Jan. 1942	Feb. 1941	Jan. 1942 to Feb. 1942	Feb. 1941 to Feb. 1942
Toledo						**Wilmington, Del.**					
Food	124.1	122.6	100.0	+1.2	+24.1	Food	129.9	130.3	106.0	-0.3	+22.5
Housing	103.9	103.2	99.7	+0.7	+4.2	Housing	103.9	103.9	101.6	0	+2.3
Clothing	118.7*p*	112.2	97.5	+5.8	+21.7	Clothing	120.2	118.2	101.1	+1.7	+18.9
Fuel and light	107.8	107.8	99.7	0	+8.1	Fuel and light	103.1	103.1	98.3	0	+4.9
Housefurnishings	117.3	114.5	100.4	+2.4	+16.8	Housefurnishings	114.0	114.0	98.3	0	+16.0
Sundries	102.7	102.7	101.2	0	+1.5	Sundries	99.5	99.5	99.4	0	+0.1
Weighted Total	111.8	110.5	100.0	+1.2	+11.8	Weighted Total	113.6	113.5	101.9	+0.1	+11.5
Wausau, Wis.						**Youngstown**					
Food	128.6	126.3	107.7	+1.8	+19.4	Food	126.5	125.8	102.1	+0.6	+23.9
Housing	102.7	102.7	104.9	0	-2.1	Housing	108.6	108.6	107.4	0	+1.1
Clothing	115.3	113.2	98.6	+1.9	+16.9	Clothing	119.8	117.3	102.4	+2.1	+17.0
Fuel and light	102.1	102.7	97.5*r*	-0.6	+4.7	Fuel and light	109.5	109.5	100.5	0	+9.0
Housefurnishings	123.4	123.4	103.3	0	+19.5	Housefurnishings	122.0	119.4	100.6	+2.2	+21.3
Sundries	104.1	103.6	100.7	+0.5	+3.4	Sundries	105.6	105.3*r*	102.7	+0.3	+2.8
Weighted Total	114.4	113.3	103.2	+1.0	+10.9	Weighted Total	116.4	115.7	103.1	+0.6	+12.9

*r*Revised *a*Data on rents for Dayton being revised *n.a.*Not available *p*Preliminary

"Fuel and light" is based upon retail prices of 35 kilowatt hours of electricity, 1,000 cubic feet of natural gas or 2,000 cubic feet of manufactured gas, and coal or other fuel for heating.

COST OF LIVING IN 8 CITIES, JANUARY AND FEBRUARY, 1942

Source: THE CONFERENCE BOARD

Percentage Changes

CITY	Jan. 1942 to Feb. 1942	Feb. 1941 to Feb. 1942	CITY	Jan. 1942 to Feb. 1942	Feb. 1941 to Feb. 1942
Anderson, Ind.			**Lewistown, Pa.**		
Food	+0.1	+20.6	Food	+1.0	*n.a.*
Housing	-0.2	+8.8	Housing	0	*n.a.*
Clothing	+2.4	+22.2	Clothing	+1.1	*n.a.*
Fuel and light	0	+5.0	Fuel and light	0	*n.a.*
Housefurnishings	+1.2	+24.8	Housefurnishings	+1.3	*n.a.*
Sundries	+0.1	+2.5	Sundries	-0.3	*n.a.*
Weighted Total	+0.4	+12.5	Weighted Total	+0.5	*n.a.*
Evansville, Ind.			**Rockford, Ill.**		
Food	+0.6	*n.a.*	Food	-0.5	+16.2
Housing	0	*n.a.*	Housing	+0.6	+14.3
Clothing	+2.9	*n.a.*	Clothing	+2.0	+18.1
Fuel and light	0	*n.a.*	Fuel and light	0	+4.2
Housefurnishings	+2.8	*n.a.*	Housefurnishings	+0.1	+21.9
Sundries	+0.3	*n.a.*	Sundries	0	+2.9
Weighted Total	+0.6	*n.a.*	Weighted Total	+0.1	+12.3
Flint, Mich.			**Saginaw, Mich.**		
Food	-1.2	+22.9	Food	+0.4	+24.1
Housing	0	+5.7	Housing	-0.4	+9.4
Clothing	+3.1	+21.5	Clothing	+3.5	+14.1
Fuel and light	0	+11.2	Fuel and light	0	+6.1
Housefurnishings	+1.0	+17.9	Housefurnishings	+1.2	+21.5
Sundries	+0.1	+3.0	Sundries	+0.1	+3.0
Weighted Total	+0.1	+13.0	Weighted Total	+0.5	+13.0
Joliet, Ill.[1]			**Trenton, N. J.**		
Food	-0.2	*n.a.*	Food	+2.5	+19.7
Housing	0	*n.a.*	Housing	0	+12.5
Clothing	+2.8	*n.a.*	Clothing	+5.0	+25.1
Fuel and light	0	*n.a.*	Fuel and light	0	+5.4
Housefurnishings	+1.4	*n.a.*	Housefurnishings	+1.7	+23.8
Sundries	+0.1	*n.a.*	Sundries	+0.3	+3.9
Weighted Total	+0.4	*n.a.*	Weighted Total	+1.6	+14.1

[1] Includes Lockport and Rockdale

Strikes and Turnover Rates

DESPITE the numerous agreements which have been made by labor and management during recent months and the several means for peaceful settlement of industrial disputes which have been made available, there was a large increase in the number of strikes reported in the press during February. These strikes are of increasing importance because many plants are already working at full capacity and lost time and production cannot be made up. A large number of the February strikes involved defense workers in foundries, shipyards, metal works, and in the machine tool industry.

In San Pedro, California, 4,700 workers in Bethlehem Steel Company shipyards walked out February 23, in protest against a ten-hour work day which had been inaugurated February 12. They returned to work on February 27, after voting to accept the company's plan for two ten-hour shifts instead of three shifts totaling twenty-two and one-half hours.

On the Pacific coast about 17,000 men were idle on Washington's Birthday because an agreement could not be reached on the pay rate for the holiday. Nearly 250 small war industry plants were affected, mainly in the San Francisco Bay area and at Seattle, Washington.

After five separate work stoppages within four days by 10,000 skilled mechanics at the River Rouge plant of the Ford Motor Company, work was finally resumed on February 12. They were engaged in making machine tools which are vitally needed for the production of four-motored army bombers. The controversy centered on the conduct of one workman and was settled only when the union heads persuaded the workers that victory depended to a large extent on an uninterrupted production schedule.

The first large work stoppage in the Pittsburgh steel area occurred on February 26 when 1,300 CIO workers called a strike at the Crucible Steel Company's Labelle plant. The dispute was over seven grievances involving 100 workmen. After a tentative agreement had been made between the Steel Workers Organizing Committee and company representatives on February 27, full operations were resumed on March 2.

Several companies have been temporarily closed for violating priority regulations; others have shut down because of lack of materials. Between 200,000 and 300,000 automobile workers will remain idle until their factories have been converted to defense work.

STRIKES IN JANUARY

Indications point to a sharp increase in strikes between January and February, but preliminary esti-

LABOR DISPUTES ORIGINATING IN FEBRUARY, 1942[1]

Organization Affected	Location	Date Begun	Date Ended	Number of Workers Involved
Manufacturing, Building and Mining				
Aluminum Company of America	Detroit, Mich.	Feb. 15	Feb. 15	2,000
Aluminum Company of America	Detroit, Mich.	17	..	800
American Car and Foundry Company	Madison, Ill.	2	..	1,500
American Steel Foundries	Granite City, Ill.	23	24	2,300
Bethlehem-Fairfield Shipbuilding Company	Baltimore, Md.	13	13	6,000
Bethlehem Steel Company Shipyards	San Pedro, Cal.	23	27	4,700
Bethlehem Steel Company Shipyards	Hoboken, N. J.	25	27	160
Columbian Bronze Corporation	Freeport, L. I., N. Y.	16[a]	22	215
Crucible Steel Company (Labelle Works)	Pittsburgh, Pa.	26	27	1,300
Detroit Nut Company	Detroit, Mich.	15	17	60
Dorset Food Ltd	New York, N. Y.	16	..	50-86
Ford Motor Company (River Rouge Plant)	Detroit, Mich.	9	12[b]	10,000
Gulf Shipbuilding Corporation (Chickasaw Yards)	Mobile, Ala.	17	23	800
Juilliard, A. D. & Co. (New York Mills Corporation)	Utica, N. Y.	15	22	2,400
Machinists	Portland, Ore.	23	23	500
Machinists	San Francisco Bay, Cal. and Seattle, Wash.	23	23	17,000
Michigan Steel Tube Products Company	Detroit, Mich.	4	8	500
Minneapolis Moline Power Implement Company	Minneapolis, Minn.	25	25	1,800
Monarch Aluminum Manufacturing Company	Cleveland, Ohio	24	25	140
Noank Shipbuilding Company	Noank, Conn.	17	19	65
Pennsylvania Transformer Company	Pittsburgh, Pa.	27	..	350
Union Electric Company of Missouri	St. Louis, Mo.	24	24	350
Miscellaneous				
Hudson Company Bus Owners Association	Hudson County, N. J.	9	23	100
Teamsters, Stockyards[2]	Detroit, Mich.	2	..	6

[1] Incomplete report based on available information published in the press

[2] These six were effective in stopping deliveries to packers

[a] Moulders worked until Feb. 18

[b] Five separate stoppages occurred between February 9 and February 12

mates released by the United States Bureau of Labor Statistics show that the 155 strikes starting in January was the lowest recorded since December, 1940. The number of workers involved, 33,000, was the lowest since March, 1940. Man days idle during the period because of all strikes amounted to 390,000, the smallest number since March, 1940, when 387,000 man days were lost.

TURNOVER RATES

The rate of accessions for all manufacturing rose during December, 1941, after declining steadily for five months. It was 4.76 per 100 employees in December, as compared to 3.91 in November and 4.11 in December, 1940. This was considerably below the peak of 6.31 in June, 1941, although it was the highest December accession rate since the 6.14 level in 1934. Total accessions for the year reached 64.51 per 100 employees, the highest figure recorded since 1933 when they were 65.20.

The separation rate also showed an upward movement, rising from 3.51 per 100 employees in November to 4.71 in December. This brought the separation rate to practically the same level as the accession rate, showing a net increase in accessions of only 0.05 per 100 employees. The December rate of 4.71 was the highest recorded since January, 1938, when it was 6.08. The total number of separations for the year, 46.68, was also the highest since the 1938 figure of 49.22.

M. A. WERTZ
Division of Industrial Economics

STRIKES, TURNOVER RATES, AND PRODUCTION

Date	All Occupations			Manufacturing					
	Strikes[1]			Production[2] (1935–1939 =100)	Turnover Rates per 100 Employees[1]				
	Beginning in Period		Man Days Idle During Period (Thousand)		Separations				Accessions
	Number	Workers Involved (Thousand)			Total	Quits and Miscellaneous	Discharges	Lay-offs	
1929	921	289	5,352	110	75.23*a*	41.01*a*	9.04*a*	25.17*a*	67.61*a*
1930	637	183	3,317	90	59.65	18.64	5.04	35.97	37.02
1931	810	342	6,893	74	48.38	11.39	2.72	34.27	36.59
1932	841	324	10,502	57	51.98	8.34	1.96	41.68	39.82
1933	1,695	1,168	16,872	68	45.38	10.66	2.49	32.23	65.20
1934	1,856	1,467	19,592	74	49.17	10.67	2.24	36.26	56.91
1935	2,014	1,117	15,456	87	42.74	10.37	2.29	30.08	50.05
1936	2,172	789	13,902	104	40.35	13.02	2.63	24.70	52.16
1937	4,740	1,861	28,425	113	53.11	14.97	2.38	35.76	42.59
1938	2,772	688	9,148	87	49.22	7.46	1.29	40.47	46.16
1939	2,613	1,171	17,812	108	37.71	9.52	1.52	26.67	48.85
1940	2,508	577	6,701	124	40.20	12.48	1.80	25.92	52.68
1941*p*	4,158	2,362	22,890	161	46.68	27.78	3.04	15.86	64.51
1940 January	128	27	247	118	3.43	0.74	0.14	2.55	3.74
February	172	30	290	114	3.56	0.73	0.16	2.67	2.98
March	178	22	387	112	3.46	0.78	0.15	2.53	2.94
April	228	39	442	112	3.66	0.84	0.13	2.69	3.05
May	239	53	666	117	3.78	0.87	0.13	2.78	3.36
June	214	39	484	122	3.36	0.90	0.14	2.32	4.76
July	244	63	586	120	3.35	0.96	0.14	2.25	4.77
August	231	61	706	125	3.00	1.21	0.16	1.63	6.63
September	253	65	781	133	3.22	1.58	0.16	1.48	6.21
October	267	72	915	138	3.23	1.51	0.19	1.53	5.52
November	207	62	740	139	3.06	1.28	0.18	1.60	4.65
December	147	43	458	140	3.16	1.14	0.16	1.86	4.11
1941 January*r*	236	92	663	139	3.41	1.62	0.18	1.61	5.54
February	253	70	1,130	144	3.15	1.76	0.19	1.20	4.92
March	338	116	1,554	149	3.40	2.13	0.21	1.06	5.62
April	395	511	7,106	153	3.89	2.45	0.25	1.19	6.04
May	450	325	2,183	160	3.86	2.54	0.24	1.08	5.95
June	340	141	1,469	165	3.71	2.42	0.26	1.03	6.31
July *r*	413	140	1,305	164	4.24	2.55	0.29	1.40	6.00
August*r*	430	208	1,756	167	4.14	2.71	0.30	1.13	5.43
September*r*	423	290	1,885	172	4.53	3.06	0.31	1.16	5.16
October*r*	405	199	1,889	173	4.13	2.44	0.28	1.41	4.87
November*r*	300	235	1,450	173	3.51	1.83	0.24	1.44	3.91
December	175	35	500	170	4.71	2.27	0.29	2.15	4.76
1942 January*p*	155	33	390	172	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*

NOTE—For back figures see *The Conference Board Economic Record*, February 11, 1941, p. 57. [1]United States Bureau of Labor Statistics [2]Federal Reserve annual production data are averages of monthly figures. *a*June to December *p*Preliminary *n.a.*Not available *r*Revised

Employment and Unemployment

JANUARY, 1942, found unemployment at its highest level since the spring of last year. In addition to the normal seasonal curtailment in construction and in retail and wholesale trade, a growing volume of "priority unemployment" became clearly evident.

Together with the normal seasonal reductions, these war dislocations raised unemployment in January to 4,150,000, the highest total since April, 1941. This was fully a million above the number without jobs in December and almost 2.5 million above the unemployment total for October.

EMPLOYMENT AND UNEMPLOYMENT, JANUARY, 1942
In Thousands

Distribution of Labor Force	January		1941		1942
	1940	1941	November	December[1]	January[1]
Total unemployment....	10,765	8,026	2,793	3,146	4,150
Total employment (including armed forces)..	43,333	46,556	52,155	51,841	50,872
Agriculture.............	8,781	8,782	9,349	8,665	8,940
Forestry and fishing.....	190	197	209	202	201
Total industry..........	15,964	18,053	20,805	20,507	20,017
Extraction of minerals..	760	759	806	805	802
Manufacturing.........	11,028	12,053	13,890	13,821	13,658
Construction...........	1,347	2,321	2,798	2,602	2,336
Transportation.........	1,892	1,950	2,269	2,238	2,183
Public Utilities.........	938	969	1,042	1,041	1,039
Trade, distribution and finance..............	7,480	7,553	8,047	8,408	7,785
Service industries (including armed forces)......	9,981	10,947	12,585	12,888	12,791
Miscellaneous industries.	937	1,024	1,161	1,171	1,137
Emergency employment[2] *WPA, CCC, and NYA (out-of-school)*..........	*2,904*	*2,583*	*1,502*	*1,463*	*1,373*

[1] Preliminary
[2] Not included in employment total

January Trends

The sharpest seasonal reduction in employment occurred in trade and distribution, with store staffs scaled down by more than 600,000 following the holiday season. Temporary lay-offs resulting from conversion and retooling for war production were most prominent in the basic industry group. In manufacturing, employment was reduced from 13,821,000 in December to 13,658,000 in January. The decrease of 163,000 in the number of manufacturing payrolls was almost three times larger than that for the corresponding months of a year ago. Similarly, the reduction in transportation employment was fully twice as large as a year ago. Unfavorable weather and the completion of current projects resulted in the curtailment of the number engaged on construction by 266,000 compared with 120,000 a year ago.

Despite these dislocations there were only half as many persons without jobs as in January, 1941. The number of unemployed a year ago was slightly above 8 million, and well above 10 million in January, 1940. Excluding agriculture and the armed forces, there were approximately 2.8 million more persons employed than at the start of 1941. Of these about 2 million have found employment in the basic industry group. Fully 1.6 million had been taken on in manufacturing plants, while 233,000 were added in transportation and 70,000 in public utilities.

"*Priority Unemployment*"

Estimates of the number of persons laid off in January because of conversion or curtailment range from 300,000 to 500,000. A sample survey by the WPA indicated that the number of persons with jobs, but not actually at work, had increased from 500,000 in December to one million in January. Some of these were not at work because of illness, unfavorable weather conditions, and so on, but much of the increase is directly attributable to the impact of conversion. Lay-offs were heaviest in automobile plants and related metal refining and metal-fabricating establishments.

Unemployment insurance benefits, which had already begun to turn upward in December, were increased sharply in January. The various unemployment compensation agencies paid out $41 million in benefits covering 4.5 million man weeks of unemployment. Almost one million workers received benefits in January, or about two-thirds more than in December. In Michigan, benefit payments were more than tripled, and there were also marked increases in payments as a result of war dislocations in Indiana, Wisconsin, Ohio and New Jersey. According to the Social Security Board the number of initial claims for benefits rose 6% over December to 1.1 million, "indicating that benefits would probably continue at a high level during February."

Agriculture

Employment in agriculture rose by 275,000 in January. Most of this increase came in the number of hired workers, whose employment was the greatest for the month since 1930. The *Farm Labor Report* of the Department of Agriculture attributes this rise to a widespread movement by farmers to get hired hands early in the hope of keeping them as the labor supply dwindles. Field reports indicate that more persons below and above draft ages are being hired for farm work than at any time during the past two decades.

M. R. GAINSBRUGH
Division of Industrial Economics

Wage-Increase Announcements, February 1 to February 28[1]

Source: Daily Press and Various Periodicals

Company	Location	Amount of Increase	Number Affected	Remarks
Aluminum Company of America	Badin, N. C. and Alcoa, Tenn.	17¢/hr.	19,000	To aluminum workers
Bellanca Aircraft Corporation	Wilmington, Del.	10¢/hr.	450	To aircraft workers. Retroactive to Jan. 1; new minimum wage after 90-day probation. Men, 75¢/hr.; women, 70¢/hr.
Bendix Products Division—Bendix Aviation Corporation	South Bend, Ind.	5½¢/hr.	7,000	To incentive workers
		7½¢/hr.		To straight-time workers
		10¢/hr.		To tool and experimental workers
Beverly Shoe Company	Lowell, Mass.	10%	200	5% effective April 6 and 5% effective May 18
Bon Marche Company	Canton, O.	6%	90	To retail employees
Borgenicht & Spiro, Inc.	Scranton, Pa.	7½%	250	To dress workers on piece-work basis
Bridgeport Brass Company	Bridgeport, Conn.	6¢/hr.	5,200	Retroactive to Jan. 3. New minimum hiring rates: Men, 71¢/hr.; women, 58¢/hr.
Builders Association of Niagara Falls	Niagara Falls, N. Y.	17¢/hr.	500	Construction laborers
Buxton, Inc	Springfield, Mass.	10%	....	To piece workers
		$2/wk.	....	To weekly workers
				New minimum wage scale: Beginners, $16/wk.; increase to $17/wk. at end of 6 mos. and $18/wk. at end of 1 yr.
Chapman Valve Company	Springfield, Mass.	5¢/hr.	....	To all production workers
Chase Brass & Copper Company	Waterbury, Conn.	6¢/hr.	5,500	To hourly and piece workers
Cleveland Punch and Shear Works Co	Cleveland, O.	10¢/hr.	250	Supplements increases totaling 15¢/hr. granted last year
Consolidated Edison System	New York, N. Y.	....	31,000	Will total about $3,750,000 per yr.
Eastern Malleable Iron Company	Naugatuck, Conn.	6¢/hr.	600	
Endicott-Johnson Corporation	Binghamton, Endicott, Johnson City and Owego, N. Y.	10%	20,000	To shoe workers and tanners. Supplements increases totaling 15% since Nov. 1940
General Steel Castings Corporation	Granite City, Mo.	13¢/hr.	300	To welders
Gondert and Lienesch Box Company	Dayton, O.	5¢/hr.	....	To box workers
Hecker Products Corporation	Buffalo, N. Y.	5¾¢/hr.	225	To milling workers. New basic pay: Men, 80¢/hr.; women, 50½¢/hr.
Jewell Alloy & Malleable Company	Buffalo, N. Y.	5¢/hr.	250	To straight time workers
		12½%		To piece workers
Link Aviation Devices, Inc	Binghamton, N. Y.	10%	1,000	To factory workers
Miami Transit Company	Miami, Fla.	10¢/hr.	....	To bus drivers
Moline Foundry Machine Company	Davenport, Ia.	5¢ to 15¢/hr.	....	
Scio Pottery Company	Cadiz, O.	10%	800	To all employees
Scovill Manufacturing Company	Waterbury, Conn.	6¢/hr.	8,700	To hourly and piece workers. New minimum wages: Men, 70¢/hr.; women, 58¢/hr.
Seattle Transit System	Seattle, Wash.	$14/mo.	....	Trolley and bus operators raised to $175/mo.
Sharpe, Inc	Buffalo, N. Y.	10%	300	To cut-glass workers
Springfield Street Railway Company	Springfield, Mass.	6¢/hr.	....	To bus operators
		8¢/hr.	....	To bus mechanics
				New minimum rates for operators: 78¢/hr. for first 3 mos.; 83¢/hr. for next 9 mos.
Sullivans-Smythfield Company	Philadelphia, Pa.	10%	....	To wholesale dry goods employees
Turney-Radiator Company	Rome, N. Y.	5¢/hr.	....	To brass workers
United States Envelope Company	Springfield, Mass.	5%	3,000	To all employees
Van Norman Machine Tool Company	Springfield, Mass.	10¢/hr.	1,700	To factory employees. Supplements two 1941 increases, totaling about 10¢/hr. Retroactive to January 1
Waterbury Buckle Company	Waterbury, Conn.	6¢/hr.	500	To factory workers
White Motor Company	Cleveland, O.	7¢/hr.	....	
Wilcox Crittenden Company	Middletown, Conn.	5%	450	To factory workers. Individual pay adjustments for office workers
36 Foundries	Philadelphia, Pa.	10¢/hr.	2,700	To all foundry workers. New minimum: Common laborers, 68¢/hr.; molders, $1.16¼/hr.
Painters	Stamford, Conn.	$2/day	....	Effective Mar. 1. New rate, $12/day
Waterfront Employer's Association	San Francisco, Cal.	10¢/hr.	12,000	To longshoremen. New rate, $1.10/hr.
435 Buildings	New York, N. Y.	10%	7,500	To building service workers. New minimum rates range from $27.50/wk. to $31.08/wk.
15 Steamship Companies	Atlantic Coast	$26/mo. avg.	166	To radio operators. New rates: Freighters, $172.50/mo.; Class B passenger ships, $168 to $204/mo.; Class C passenger ships, $165 to $198/mo.

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[1] Includes salary-increase announcements.

Chronology of Events Affecting Labor Relations, February 1 to February 28

February

1 *Rise in Collective Bargaining*—NLRB reports that in 1941 more than a million workers sought the Board's assistance in determining collective bargaining agency. Of nearly 750,000 valid votes cast, 70%, a new high, were cast for nationally affiliated unions.

Union Growth in Great Britain—British Minister of Labour reports that at end of 1940 total membership of trade unions in Great Britain and Northern Ireland was 6,542,000, which represented a growth of about 5% during the year.

2 *Federal Civilian Jobs Increase*—Civilian employment in United States executive branch increased to 1,487,925 on September 30, 1941, a gain of almost 9% during the quarter. The War Department alone added 77,672.

5 *Auto Union Asks $1.00 a Day*—UAW-CIO announces that it will ask for wage increases of $1.00 a day and a union shop in the negotiations with General Motors Corporation.

6 *Steel Deadlock Goes to War Labor Board*—The case of the Steel Workers Organizing Committee's negotiations with independent steel companies, on which agreement was not reached in negotiations, is submitted to the War Labor Board. The main demands include a general wage increase of $1.00 a day and union security.

Union Members Oppose Check-off—Gallup Poll survey, conducted among a thousand labor leaders in 82 industrial centers and among a cross-section of union rank and file in same areas, shows only 46% of union leaders and 29% of union members in favor of the check-off.

9 *Workers Provide Transportation*—20 factory workers employed by J. I. Case Company at Rockford, Illinois, purchased former school bus to provide transportation to and from work. Employees have applied for a state charter to operate bus and two for chauffeur's licenses.

11 *Labor Board Stresses "No Stoppage"*—In its first decision National War Labor Board insists that work must continue while differences of opinion are ironed out. Decision involved the Federated Fishing Boats of New England and New York, Inc., and the Atlantic Fishermen's Union, AFL.

Postwar Employee Reserve Created—Westinghouse Electric and Manufacturing Company establishes a special separation reserve fund to assist employees who might be furloughed during the change from war production to normal operation. Company will place in reserve fund ½ of 1% of its payroll each month.

14 *AFL Favors Cost of Living Adjustments*—AFL proposes that wages be tied to living costs in order to maintain present living standards for the duration of the war. According to proposal, wages would be readjusted each month to conform to changes in the Department of Labor cost of living index.

February

16 *Third Draft Registration*—The third registration for selective service is completed with the enrolment of an estimated nine million men between ages 20 and 44.

17 *CIO Asks Deferments*—CIO national headquarters reports asking deferment for union leaders in key positions on the ground that a man conducting collective bargaining has the same importance as a man working on a machine, and, therefore, deserves deferment.

Labor Corruption Inquiry Ordered—Governor Lehman of New York orders sweeping investigation of charges of corruption and kick-backs by union officials on the complaint of a committee of 23 members of the Hodcarriers and Common Laborers Union of America, AFL.

AFL Fights Discrimination—AFL headquarters pledges that the charter of a union in New Jersey would be suspended if the union persisted in barring Negroes from employment.

18 *NWLB Not Policy-Forming Body*—William M. Leiserson of NLRB in address holds that War Labor Board is not properly a policy-forming authority and that national policies on closed-shop issue and wage increases should be established by the President or by Congress.

19 *Increased Federal Aid Disapproved*—The House Ways and Means Committee kills the Doughton Bill authorizing expenditure of $300,000,000 to supplement unemployment compensation for workers temporarily jobless by reason of government orders.

21 *Henderson Opposes Wage Increases*—Speaking before National Farm Institute, Price Administrator Henderson opposes any general wage increase or increase in price of farm products much above parity.

NWLB Denies Wage Increase and Closed Shop—In unanimous decision, War Labor Board, in Phelps Dodge case, denies wage increase of $1.00 a day on ground that it would disturb a stable local wage situation and also refuses to grant closed shop, indicating that an authoritative national policy on this matter may be established in near future.

27 *40-Hour Week Sustained*—By a vote of 226 to 62, the House defeats Smith Amendment to second war powers bill which would have removed from 17 federal statutes the requirement to pay time and a half after 40 hours' work. The vote reversed a trend that seemed apparent during the preceding day's debate.

Wage Issue Referred Back to Company—The issue between UAW-CIO and General Motors Corporation regarding extra compensation for work on Sundays and holidays is referred back by the War Labor Board for settlement under terms of an existing contract which, while requiring payment of double time for Sundays and holidays, has a grievance machinery clause finally leading to arbitration.